

# **APPENDIX H**

## ***Greenhouse Gas Technical Report***





**Greenhouse Gas Technical Report**  
**Agua Hedionda South Shore**  
**Specific Plan for 85% Open Space**  
**and 15% Retail**  
**Carlsbad, California**

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## Acronyms and Abbreviations

Acronym	Definition
AB	Assembly Bill
ACC	Advanced Clean Cars
AvgHp	Maximum rated average horsepower
BAU	Business-As-Usual
CalEEMod™	California Emission Estimator Model™
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAR	Climate Action Reserve
CARB	California Air Resources Board
CCCC	California Climate Change Center
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	Commercial End-Use Survey
CFCs	chlorofluorocarbons
CH <sub>4</sub>	Methane
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	CO <sub>2</sub> equivalents
DOE	Department of Energy
DOT	Department of Transportation
DWR	California Department of Water Resources
EF	emission factor
EISA	Energy Independence and Security Act of 2007
EMFAC	EMission FACtor model
ENVIRON	ENVIRON International Corporation
EPF	Environmental Protection Feature
ES	Executive Summary
EV	electric vehicle
FED	Functional Equivalent Document

<b>Acronym</b>	<b>Definition</b>
GHG	greenhouse gas
GHG Rx	Greenhouse Gas Reduction Exchange
GWP	global warming potential
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
lb	pound
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy & Environmental Design
MMgal/yr	Million gallons per year
MSW	Municipal solid waste
MT	tonnes or metric tons
MTCO <sub>2</sub> e	tonnes or metric ton of CO <sub>2</sub> equivalent
N <sub>2</sub> O	nitrous oxide
NAT	No Action Taken
NHTSA	National Highway Traffic Safety Administration
pop	Population
ppm	parts per million
PUP	Power/Utility Protocol
PV	photovoltaic
RASS	Residential Appliance Saturation Survey
RPS	Renewable Portfolio Standards
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategies
SDG&E	San Diego Gas and Electric
Seq CO <sub>2</sub>	Sequestered CO <sub>2</sub>
TDM	Transportation Demand Management
USEPA	United States Environmental Protection Agency
VMt	vehicle miles traveled

## Executive Summary

The Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail (Agua Hedionda 85/15 Specific Plan or Specific Plan) is comprised of approximately 203.4 acres of land between the south shore of the Agua Hedionda Lagoon and Cannon Road in the City of Carlsbad, California. The Specific Plan will permanently protect and conserve approximately 176.7 acres for open space, the continuation of strawberry farming and coastal agricultural (more than 85% of the Specific Plan area), and will reserve approximately 26.7 acres (less than 15% of the Specific Plan area) for a new pedestrian-friendly visitor serving outdoor retail, shopping, dining and entertainment promenade, all at no tax burden to the residents of Carlsbad. The Specific Plan requires that the open space lands be improved with low impact public access by providing passive recreation amenities including miles of new nature trails and walkways, picnic and rest areas, lagoon vistas, an outdoor classroom, parking and an integrated resource and educational signage program. The Outdoor Shopping, Dining, and Entertainment Promenade, together with supporting uses including a farm-to-table restaurant and farm stand will provide for a total of approximately 585,000 square feet of visitor serving uses within the Specific Plan. The implementation of the Specific Plan is anticipated to occur between 2017 and 2019. This report has been prepared consistent with the Specific Plan. This Executive Summary includes a short description of the analysis scope and methodology and the results of the analysis to assess greenhouse gas (GHG) emissions due to the Specific Plan.

The GHG emissions inventory for this analysis includes the following sources of annual direct and indirect emissions: (1) area sources (e.g., landscaping-related fuel combustion sources and natural gas fireplaces); (2) energy use associated with non-residential buildings; (3) water and wastewater; (4) solid waste; (5) mobile sources (e.g., passenger vehicles); (6) construction; and (7) vegetation changes. The ongoing operational emissions consist of the first five categories, while the one-time emissions are associated with construction and vegetation changes. The typical types of GHG emissions resulting from commercial developments such as the Specific Plan are emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). GHG emissions are typically measured in terms of tonnes of CO<sub>2</sub> equivalents (CO<sub>2</sub>e), calculated as the product of the mass emitted of a given GHG and its specific global warming potential (GWP).

This analysis primarily utilized the California Emission Estimator Model version 2013.2.2 (CalEEMod™)<sup>1</sup> to assist in quantifying the GHG emissions in the inventories presented in this report for the Specific Plan. CalEEMod™ is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. Third-party studies were also relied upon to support analyses and assumptions made outside of CalEEMod™.

At this time, there are no applicable, adopted numeric criteria that govern the determination of the significance of the Specific Plan's GHG emissions. This GHG Emissions Technical Report assesses the significance of the Specific Plan's GHG emissions using six different

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<sup>1</sup> SCAQMD. 2013. California Emissions Estimator Model®. Available at: <http://www.CalEEMod.com/>  
Accessed: March 2015.



methodologies. Each of the six methodologies is a separate and independent basis for the significance determination herein.

The first methodology in this report considers the extent to which the Specific Plan may increase or reduce GHG emissions as compared to the existing environmental setting. As documented in subsequent portions of this report and shown in Table ES-1, the Specific Plan site – in its existing condition – emits approximately 227 metric tons (MT) of CO<sub>2</sub>e per year, whereas the Specific Plan emits approximately 33,076 metric tons of CO<sub>2</sub> equivalent (MTCO<sub>2</sub>e) per year (as shown in Table ES-2) in addition to the existing condition emissions. Since the existing condition emissions are expected to continue to occur, the Specific Plan results in a change to the existing environment, by increasing existing GHG emission levels by approximately 33,076 MT of CO<sub>2</sub>e per year (i.e., the existing condition emissions are not subtracted out). While the Specific Plan results in a change to the existing environment, there is no scientific or regulatory consensus regarding what particular quantity of GHG emissions is significant. Therefore, this numeric change is not a meaningful, informative, or reliable indicator of the Specific Plan's significance. For additional comparison, the Specific Plan percentage contribution to the existing international, national, and state GHG emission inventories are 0.0001%, 0.0005%, and 0.01% respectively, as presented in Table ES-3.

The second methodology is utilized in this report to assess the Specific Plan's significance under the 2006 Global Warming Solutions Act, often referred to as Assembly Bill 32 (AB 32). This methodology considers (i) whether the Specific Plan's emissions exceed a criterion of significance that the lead agency determines applies and (ii) the extent to which the Specific Plan complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

AB 32 requires the State to achieve 1990 levels of GHG emissions by 2020, which originally equated to a 28.5 percent reduction in GHG emissions per the 2008 AB 32 Scoping Plan. In 2011, however, the Scoping Plan's Functional Equivalent Document (2011 FED)<sup>2</sup> was released; and, that document revised the state's 2020 emissions projections based on the prolonged economic downturn and inclusion of estimated regulation-based reductions. Based on this document, the state would achieve 1990 levels of GHG emissions by 2020 with a 21.7 (not 28.5) percent reduction in GHG emissions after accounting for the economic downturn.

Therefore, for the second methodology, the analysis in this report used the AB 32 Scoping Plan's statewide reduction target (21.7), as delineated in the 2011 FED, as the basis for determining the significance of the Specific Plan's GHG emissions. The report's methodology is to compare the Specific Plan's emissions as proposed to the Specific Plan's emissions if the Specific Plan were built using a Business-As-Usual (BAU) (or No Action Taken, NAT) approach in terms of design, methodology, and technology. This means the Specific Plan's emissions were calculated in two ways: (i) as if the Specific Plan was constructed before AB 32, and (ii) as actually proposed to be constructed with Environmental protection Features to reduce GHGs and with several regulatory measures adopted in furtherance of AB 32.

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<sup>2</sup> California Air Resources Board, *Status of Scoping Plan Recommended Measures*, July 25, 2011. Available at [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf). Accessed: February 2015.

Emissions for the Specific Plan are presented in Table ES-2. Both one-time emissions and indirect emissions are expected to occur each year after build-out of the Specific Plan. One-time emissions from construction and vegetation removal were amortized over a 30-year period because no significance criteria has been adopted for such emissions.<sup>3</sup> The identified emission reductions result from the Specific Plan's commitments and regulatory changes, which include the implementation of the Renewable Portfolio Standard (RPS) of 33 percent, the Pavley regulation and Advanced Clean Cars (ACC) program mandating higher fuel efficiency standards for light-duty vehicles, and the Low Carbon Fuel Standard (LCFS). The emissions for the Specific Plan and its associated California Air Resources Board (CARB) 2020 NAT condition are estimated to be 33,076 and 47,585 MT CO<sub>2</sub>e per year, respectively, which shows the Specific Plan will reduce emissions by 30.5 percent from the CARB 2020 NAT condition. Based on these results, the Specific Plan meets the reduction target (21.7 percent) identified in the Scoping Plan's 2011 FED (2011 FED).

The third methodology analyzes the Specific Plan's consistency with AB 32 by evaluating the Specific Plan's GHG emissions as compared to a CARB 2020 NAT projection delineated in accordance with CARB's 2014 First Update to the Climate Change Scoping Plan (2014 Scoping Plan). Based on CARB's revised estimates of expected 2020 emissions identified in the First Update to the Scoping Plan, which take into account reductions from measures currently in place, achieving the 1990 emission level would require an approximately 15.8 percent reduction from the 2020 NAT condition. As presented in Table ES-4, the emissions for the Specific Plan and its associated 2020 NAT condition are estimated to be 33,116 and 40,585 MT CO<sub>2</sub>e per year, respectively, which shows the Specific Plan will reduce emissions by 18.4 percent from the CARB 2020 NAT condition.

The fourth methodology assesses the Specific Plan's significance under the Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill 375 (SB 375). SB 375 requires the State's metropolitan planning organizations to adopt Sustainable Communities Strategies (SCS) that coordinate transportation and land use planning in order to reduce GHG emissions from light duty, passenger vehicles. The SB 375 analysis specifically evaluates the consistency of the Specific Plan's land use assumptions with the San Diego Association of Governments' (SANDAG) RTP/SCS. Based on that evaluation, the Specific Plan's land use development is consistent with the City of Carlsbad's General Plan land use designation used by SANDAG to develop its SB 375 forecasted development pattern in the SCS. Similarly, the Specific Plan area was identified for regional commercial development in the SANDAG model. Because the SANDAG model anticipated development of the kind and quantity proposed by the Specific Plan, and the model demonstrated achievement of the SB 375 reduction targets to the satisfaction of CARB, the Specific Plan is consistent with the objectives of SB 375 and SANDAG's SCS (see Appendix B).

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<sup>3</sup> This approach to one-time construction and vegetation change GHG emissions is based on the GHG Criteria Working Group Meeting #13 Minutes from August 26, 2009. Available at: [http://www.agmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2](http://www.agmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2). Accessed: March 2015.

Fifth, this report evaluates the Specific Plan's design by comparison to the draft City of Carlsbad Climate Action Plan (CAP) "Checklist." The Specific Plan will include numerous design features in the applicable categories contemplated by the CAP. These include:

- Photovoltaic panels over 60 percent of the parking garage roof;
- Exceeding the current 2013 Title 24 standards by 5%;
- A Transportation Demand Management (TDM) Program to reduce trip generation; and
- Providing preferential parking for electric vehicles and six electric vehicle charging stations.
- Numerous other GHG reduction measures:
  - Implementing Leadership in Energy & Environmental Design (LEED) Gold Core and Shell Design Standard;
  - Incorporating Energy Star appliances;
  - Installing high efficiency lighting;
  - Installing electronic parking availability signage;
  - Incorporating an Energy Management System; and
  - Implementing water conservation measures, such as using recycled water or outdoor irrigation and installing dual flush toilets, waterless urinals, and self-closing faucets.

In addition, the sixth methodology assesses the Specific Plan's consistency with Executive Order B-30-15's interim goal to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, and Executive Order S-3-05's long-term goal to reduce statewide GHG emissions to 80 percent below 1990 levels by 2050. While it would be speculative to quantitatively estimate the Specific Plan's emissions level in 2030 and 2050 (due to the undefined and unknown regulatory and technology standards in those future years), the evolving regulatory framework and advancing technology suggest that the Specific Plan's emissions inventory will decrease with time, consistent with the objective of both Executive Orders to secure further reductions in California's GHG emissions level. In particular, in order to reach the 2030 and 2050 goals, activities, such as decarbonization of the fuel supply, will need to occur.<sup>4</sup> Reducing the carbon content of motor fuels and fuels for electricity generation will reduce CO<sub>2</sub>e emissions from this Specific Plan. Therefore, it is reasonable to expect the Specific Plan's emissions level (approximately 33,076 metric tons of CO<sub>2</sub>e per year in 2020) to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Specific Plan's emissions total at build-out represents the maximum emissions inventory for the Specific Plan as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. Given the reasonably anticipated decline in Specific Plan emissions once fully constructed and operational, the Specific Plan is in line with the Executive Orders 2030 and 2050 emissions reduction goals.

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<sup>4</sup> California Energy Commission. 2007. State Alternative Fuels Plan. December. CEC-600-2007-011-CMF. Available at: <http://www.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CMF.PDF>. Accessed: January 2015.

**Table ES-1. Summary of Baseline/Existing Condition GHG Emissions**

Agua Hedionda 85/15 Specific Plan  
Carlsbad, California

Category	CO <sub>2</sub> e Emissions (MT/year) <sup>1</sup>
Off-road equipment <sup>2</sup>	7
Energy use associated with water <sup>3,4</sup>	128
Fertilizer use <sup>5</sup>	92
<b>Total</b>	<b>227</b>

**Notes:**

<sup>1</sup> Baseline emissions are estimated for the existing agricultural operation at the site.

<sup>2</sup> Emissions from off-road equipment were calculated based on the off-road diesel emission factors in the CARB OFFROAD2007 program. CARB OFFROAD2011 does not include the relevant equipment. The calculations assume the use of one diesel tiller for bed preparation and one diesel sprayer for pesticides and fertilizer applications.

<sup>3</sup> Energy usage rate based on California Energy Commission. 2006. Refining Estimates of Water-Related Energy Use in California. PIER Final Project Report. Prepared by Navigant Consulting, Inc. CEC-500-2006-118. Table ES-1. Available at:  
<http://www.energy.ca.gov/2006publications/CEC-500-2006-118/CEC-500-2006-118.PDF>.  
Accessed: February 2015.

<sup>4</sup> Water usage based on UC Davis. Water Reduction Methods for Strawberry Irrigation.  
[http://watermanagement.ucdavis.edu/files/6413/8255/4526/04\\_Group\\_Vu\\_Moore\\_Nedelcheva\\_Mai.pdf](http://watermanagement.ucdavis.edu/files/6413/8255/4526/04_Group_Vu_Moore_Nedelcheva_Mai.pdf).  
Accessed: February 2015.

<sup>5</sup> Fertilizer usage based on University of California Cooperative Extension 2011 Sample Costs to Produce Strawberries. [http://coststudies.ucdavis.edu/files/Strawberry\\_SC\\_VC\\_2011.pdf](http://coststudies.ucdavis.edu/files/Strawberry_SC_VC_2011.pdf). Accessed: February 2015.

**Abbreviations:**

CARB - California Air Resources Board  
CO<sub>2</sub>e - carbon dioxide equivalents  
kg - kilogram

MT - metric ton  
N<sub>2</sub>O - nitrous oxide  
OFFROAD - Off-Road Mobile-Source Emission  
Factor models

**Table ES-2. Summary of Specific Plan GHG Emissions in Comparison to CARB 2020 NAT (2011 FED)**

Agua Hedionda 85/15 Specific Plan  
Carlsbad, California

Category <sup>1</sup>	CO <sub>2</sub> e Emissions <sup>2</sup>		
	2020 Specific Plan (2011 FED)	CARB 2020 NAT (2011 FED)	% Change From 2020 NAT
	(MT/yr)	(MT/yr)	
Area	0.1	0.1	0.0%
Energy Use	3,213	4,767	-32.6%
Water Use	187	251	-25.5%
Waste Disposed	290	499	-41.8%
Traffic	32,023	41,931	-23.6%
<b>Sub-Total</b>	<b>35,713</b>	<b>47,448</b>	<b>-24.7%</b>
Construction Amortized <sup>3</sup>	119	119	0.0%
Vegetation Amortized <sup>3</sup>	18	18	0.0%
<b>Amortized Sub-Total</b>	<b>137</b>	<b>137</b>	<b>0.0%</b>
<b>Reductions from Specific Plan features<sup>4</sup></b>			
Photovoltaic Panel Installation	-799	--	--
Exceed 2013 Title 24 Standards by 5%	-37	--	--
Transportation Demand Management	-1,863	--	--
Electric Vehicle Charging Station Installation	-75	--	--
<b>Sub-Total</b>	<b>-2,774</b>	<b>--</b>	<b>--</b>
<b>Total</b>	<b>33,076</b>	<b>47,585</b>	<b>-30.5%</b>

Notes:

<sup>1</sup> CO<sub>2</sub>e emissions were estimated using CalEEMod™ version 2013.2.2 for all operational categories. Since the existing condition emissions are expected to continue to with the Specific Plan, they are not included in the inventory for this analysis.

<sup>2</sup> CO<sub>2</sub>e includes CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions, which are weighted by their respective global warming potentials from the 2011 FED (310 for N<sub>2</sub>O and 21 for CH<sub>4</sub>).

<sup>3</sup> One-time emissions from construction and vegetation removal were amortized over a 30-year period.

Source: SCAQMD. 2009. Minutes for the GHG CEQA Significance Criteria Stakeholder Working Group #13. August. Available online at:

[http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-Criterias/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-Criterias/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2). Accessed: March 2015.

<sup>4</sup> The reduction from the installation of Energy Star appliances is included in the energy use value.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel  
CARB - California Air Resources Board  
CH<sub>4</sub> - methane  
CO<sub>2</sub> - carbon dioxide  
CO<sub>2</sub>e - carbon dioxide equivalents  
FED - Functional Equivalent Document

GHG - greenhouse gases  
MT - metric tons  
NAT - No Action Taken  
N<sub>2</sub>O - nitrous oxide  
yr - year

**Table ES-3. Specific Plan GHG Emissions Percentage Contribution to Existing International, National, and State Inventories**

Agua Hedionda 85/15 Specific Plan  
Carlsbad, California

Emission Inventory	CO <sub>2</sub> e Emissions <sup>1</sup>	CO <sub>2</sub> e Percentage Contribution to Existing Inventory
	(MT/yr)	(MT/yr)
Specific Plan	33,076	--
State of California - 2012 <sup>2</sup>	459,000,000	0.01%
United States of America - 2012 <sup>3</sup>	6,525,600,000	0.0005%
Global - 2010 <sup>4</sup>	50,101,410,000	0.0001%

Notes:

<sup>1</sup> CO<sub>2</sub>e includes CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O emissions. For all emission inventories other than "Specific Plan," halogenated compounds, which are associated with industrial activity and not expected to be a component of Specific Plan emissions, are included. All species are weighted by their respective global warming potentials to calculate CO<sub>2</sub>e.

Abbreviations:

CH <sub>4</sub> - methane	MT - metric tons
CO <sub>2</sub> - carbon dioxide	N <sub>2</sub> O - nitrous oxide
CO <sub>2</sub> e - carbon dioxide equivalents	USEPA - United States Environmental Protection Agency
GHG - greenhouse gases	yr - year

References:

- <sup>2</sup> CARB. 2014. California Greenhouse Gas Inventory: 2000-2012. Available at: [http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg\\_inventory\\_00-12\\_report.pdf](http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf). Accessed: February 2015.
- <sup>3</sup> USEPA. 2014. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012. Available at: <http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2014-Main-Text.pdf>. Accessed: March 2015.
- <sup>4</sup> Joint Research Centre, European Commission. 2013. GHG (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, F gases) emission time series 1990-2010 per region/country. Emission Database for Global Atmospheric Research. Available at: <http://edgar.jrc.ec.europa.eu/overview.php?v=GHGs1990-2010>. Accessed: March 2015.

**Table ES-4. Summary of Specific Plan GHG Emissions in Comparison to CARB 2020 NAT (2014 Scoping Plan)**

Agua Hedionda 85/15 Specific Plan  
Carlsbad, California

Category <sup>1</sup>	CO <sub>2</sub> e Emissions <sup>2</sup>		
	2020 Specific Plan (2014 Scoping Plan)	CARB 2020 NAT (2014 Scoping Plan)	% Change From 2020 NAT
	(MT/yr)	(MT/yr)	
Area	0.2	0.2	0.0%
Energy Use	3,213	4,218	-23.8%
Water Use	191	230	-17.1%
Waste Disposed	321	552	-41.8%
Traffic	32,028	35,447	-9.6%
<b>Sub-Total</b>	<b>35,753</b>	<b>40,448</b>	<b>-11.6%</b>
Construction Amortized <sup>3</sup>	119	119	0.0%
Vegetation Amortized <sup>3</sup>	18	18	0.0%
<b>Amortized Sub-Total</b>	<b>137</b>	<b>137</b>	<b>0.0%</b>
<b>Reductions from Specific Plan features<sup>4</sup></b>			
Photovoltaic Panel Installation	-799	--	--
Exceed 2013 Title 24 Standards by 5%	-37	--	--
Transportation Demand Management	-1,863	--	--
Electric Vehicle Charging Station Installation	-75	--	--
<b>Sub-Total</b>	<b>-2,774</b>	<b>--</b>	<b>--</b>
<b>Total</b>	<b>33,116</b>	<b>40,585</b>	<b>-18.4%</b>

Notes:

<sup>1</sup> CO<sub>2</sub>e emissions were estimated using CalEEMod™ version 2013.2.2 for all operational categories. Since the existing condition emissions are expected to continue to with the Specific Plan, they are not included in the inventory for this analysis.

<sup>2</sup> CO<sub>2</sub>e includes CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions, which are weighted by their respective global warming potentials based on the First Updated Scoping Plan (2014 Scoping Plan): 25 for CH<sub>4</sub> and 298 for N<sub>2</sub>O.

<sup>3</sup> One-time emissions from construction and vegetation removal were amortized over a 30-year period. Source: SCAQMD. 2009. Minutes for the GHG CEQA Significance Criteria Stakeholder Working Group #13. August. Available online at: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2). Accessed: March 2015.

<sup>4</sup> The reduction from the installation of Energy Star appliances is included in the energy use value.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel  
CARB - California Air Resources Board  
CH<sub>4</sub> - methane  
CO<sub>2</sub> - carbon dioxide  
CO<sub>2</sub>e - carbon dioxide equivalents

GHG - greenhouse gases  
MT - metric tons  
NAT - No Action Taken  
N<sub>2</sub>O - nitrous oxide  
yr - year

# 1 Introduction

The purpose of this technical report is to present the quantitative analyses that were used to evaluate greenhouse gas (GHG) emissions from the Specific Plan. Emissions during both construction and operations of the Specific Plan were quantified. Legislation and rules regarding climate change, as well as scientific understanding of the extent to which different activities emit GHGs, continue to evolve; as such, the inventory in this report is a reflection of the guidance and knowledge currently available.

## 1.1 Specific Plan Description

The Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail (Agua Hedionda 85/15 Specific Plan or Specific Plan) is comprised of approximately 203.4 acres of land between the south shore of the Agua Hedionda Lagoon and Cannon Road in the City of Carlsbad, California. The Specific Plan will permanently protect and conserve approximately 176.7 acres for open space, the continuation of strawberry farming and coastal agricultural (more than 85% of the Specific Plan area), and will reserve approximately 26.7 acres (less than 15% of the Specific Plan area) for a new pedestrian-friendly visitor serving outdoor retail, shopping, dining and entertainment promenade, all at no tax burden to the residents of Carlsbad. The Specific Plan requires that the open space lands be improved with low impact public access by providing passive recreation amenities including miles of new nature trails and walkways, picnic and rest areas, lagoon vistas, an outdoor classroom, parking and an integrated resource and educational signage program. The Outdoor Shopping, Dining, and Entertainment Promenade, together with supporting uses including a farm-to-table restaurant and farm stand will provide for a total of approximately 585,000 square feet of visitor serving uses within the Specific Plan. The implementation of the Specific Plan is anticipated to occur between 2017 and 2019. This report has been prepared consistent with the Specific Plan.

Table 1 summarizes the land uses for the Specific Plan.

Analysis of the Specific Plan's GHG emissions incorporates the following statewide initiatives, and design elements:

### ***Statewide Initiatives – Quantified Reductions***

- The carbon dioxide equivalent (CO<sub>2</sub>e) intensity factor for the Specific Plan includes the 33% Renewables Portfolio Standard (RPS);
- The Pavley regulation mandating higher fuel efficiency standards for cars and light-duty vehicles, Low Carbon Fuel Standard (LCFS), and the Advanced Clean Cars (ACC) program are included in the vehicle emissions estimate for the Specific Plan;
- The Specific Plan will meet, at a minimum, the statewide 2013 Building Energy Efficiency Standards, formally known as Title 24, Part 6;
- The Specific Plan will meet the statewide goal of 75% solid waste diversion by 2020, by reducing, recycling, or composting the generated waste;



- The Specific Plan will meet the statewide goal of 20% reduction for indoor water consumption by 2020 as required by CALGreen Building Standards, formally known as Title 24, Part 11, through the use of water saving fixtures and/or flow restrictors; and
- The Specific Plan will incorporate the use of recycled water usage consistent with the State Water Resources Control Board policy.<sup>5</sup>

### ***Environmental Protection Features (EPFs)***

- **EPF GHG-1** - Specific Plan design shall include photovoltaic panels to cover a minimum of 60% of the parking structure roof.
- **EPF GHG-2** - The Specific Plan's nonresidential structures shall exceed the 2013 Title 24 Building Energy Efficiency Standards by 5% (California Code of Regulations, Title 24, Part 6). In the event that an update to the 2013 Standards becomes effective before building permits are secured and that update achieves greater than a 5% improvement in energy efficiency relative to the 2013 Standards, the Specific Plan will comply with the then-effective and applicable building standards.
- **EPF GHG-3** - The Specific Plan shall require the installation of six electric vehicle charging stations and provide preferential parking locations for electric vehicles.
- **EPF GHG-4** - The Specific Plan shall require:
  1. The use of Energy Star appliances, where available, by the commercial tenants;
  2. The installation of high-efficiency interior and exterior lighting; and,
  3. The implementation of water conservation measures, such as using recycled water for outdoor irrigation, and installing dual-flush toilets, waterless urinals, and self-closing faucets.
- **EPF GHG-5** - The Proposed Specific Plan will implement traffic-related design elements and Specific Plan EPFs, collectively referred to as Transportation Demand Management (TDM) measures.
- **EPF GHG-6** - The Specific Plan Proponent shall design the visitor-serving commercial retail structures to adhere to the Leadership in Energy and Environmental Design (LEED) Gold Core and Shell Design Standards.
- **EPF GHG-7** - The Specific Plan will require the commercial retail structures to utilize a computer-based energy management system capable of reducing and optimizing operational energy consumption. The energy management system will be designed to provide automated control and monitoring of the Specific Plan's energy consumption from heating, air conditioning, ventilation and lighting. The data obtained from the energy management system then will be used by the Specific Plan Proponent and individual commercial tenants to perform self-diagnostic and optimization routines at regularly-

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<sup>5</sup> The California Water Resources Control Board adopted the recycled water policy in 2009 and revised the policy in 2013. Available at: [http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2013/rs2013\\_0003\\_a.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2013/rs2013_0003_a.pdf). Accessed: February 2015.

scheduled intervals, and prepare trend analysis and consumption forecasts, thereby facilitating enhancements to the efficiency of energy consumption.

- **EPF GHG-8** - The Specific Plan shall require the installation of electronic parking availability signage to facilitate the smooth and efficient movement of vehicles.
- **EPF GHG-9** - To minimize idling time and combustion of vehicle fuels, the Specific Plan Proponent shall ensure that any commercial building that utilizes large-scale refrigerated storage (e.g., restaurant; grocery store) equips each loading dock with an electrical hook-up to power refrigerated trucks.
- **EPF GHG-10** - To minimize fuel combustion, all landscaped areas associated with the Specific Plan's commercial land uses shall be landscaped and maintained with electrical equipment, to the extent feasible.

A few regulations adopted on the federal and/or state level were not incorporated due to the difficulty in modeling and quantifying the reductions consistent with other analysis assumptions. They are:

- Heavy-duty Engines and Vehicles Fuel Efficiency Standards adopted by the United States Environmental Protection Agency (USEPA) and the National Highway Traffic Safety Administration (NHTSA) for model year 2014-2018 as described in Section 2.2.1.1.<sup>6</sup>
- Energy Independence and Security Act, which promotes the supply of renewable fuel, the production of light bulbs with higher efficiency, creation of "green jobs," etc. as described in Section 2.2.1.1.
- The California Appliance Efficiency Regulations as described in Section 2.2.2.3.

Incorporating these regulations into the Specific Plan's 2020 emissions estimate would further reduce the Specific Plan's impact as compared to a CARB 2020 No Action Taken (NAT) condition.

## 1.2 Existing Conditions

The Specific Plan area encompasses conservation and improvements associated with approximately 203.4 acres of land situated between the south shore of the inner Agua Hedionda Lagoon and Cannon Road. The land area covered by the Specific Plan was originally under the ownership of San Diego Gas & Electric (SDG&E) and part of its Encina Power Station land holdings, whose 400-foot exhaust stack and power plant and transmission facilities have been a city landmark near the edge of the ocean and Agua Hedionda Lagoon since the mid-1950s. The land is comprised of two separate parcels, identified as San Diego County's Assessor Parcel Nos. 211-010-024, and 211-010-031.

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<sup>6</sup> If incorporated, these standards would reduce the estimated emissions for the affected vehicles by 6 to 23 percent over the 2010 baselines. Available at: <http://www.epa.gov/otaq/climate/documents/420f11031.pdf>. Accessed: February 2015.

## 2 Scientific Background, Regulatory Background, and Significance Criteria

### 2.1 Scientific Background

There is a general scientific consensus that global climate change is occurring, caused in whole or in part by increased emissions of GHGs that keep the Earth's surface warm by trapping heat in the Earth's atmosphere, in much the same way as glass traps heat in a greenhouse. The Earth's climate is changing because human activities, primarily the combustion of fossil fuels, are altering the chemical composition of the atmosphere through the buildup of GHGs. GHGs allow the sun's radiation to penetrate the atmosphere and warm the Earth's surface, but do not let the infrared radiation emitted from the Earth escape back into outer space. As a result, global temperatures are predicted to increase over the century. In particular, if climate change remains unabated, surface temperatures in California are expected to increase anywhere from 4.1 to 8.6 degrees Fahrenheit by the end of the century. Not only would higher temperatures directly affect the health of individuals through greater risk of dehydration, heat stroke, and respiratory distress, the higher temperatures may increase ozone formation, thereby worsening air quality. Rising temperatures could also reduce the snowpack, which would increase the risk of water shortages. Higher temperatures along with reduced water supplies could reduce the quantity and quality of agricultural products. In addition, there could be an increase in wildfires and a shift in distribution of natural vegetation throughout the State. Global warming could also increase sea levels and coastal storms resulting in greater risk of flooding.

Emissions of carbon dioxide (CO<sub>2</sub>) are the leading cause of global warming, with other pollutants such as methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons, and sulfur hexafluoride also contributing. The magnitude of the impact on global warming differs among the GHGs. For example, HFCs, perfluorocarbons, and sulfur hexafluoride have a greater "global warming potential" than CO<sub>2</sub>. In other words, these other GHGs have a greater contribution to global warming than CO<sub>2</sub> on a per mass basis. The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP), and is expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. Thus, GHG emissions are typically measured in terms of tonnes or metric tons (MT) of CO<sub>2</sub>e. CO<sub>2</sub> has the greatest impact on global warming because of the relatively large quantities of CO<sub>2</sub> emitted into the atmosphere.

Globally, CO<sub>2</sub> concentrations, which ranged from 265 parts per million (ppm) to 280 ppm over the last 10,000 years, only began rising in the last 200 years to current levels of 397 ppm, a 42 percent increase.

In 2012, the United States emitted about 6.5 billion MT (emissions not including sinks) of CO<sub>2</sub>e<sup>7</sup> or about 20.5 MT/person/year, calculated by dividing by the US Census Bureau 2012 population

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<sup>7</sup> USEPA. 2014. Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2012. Available at: <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>. Accessed: February 2015.

estimate.<sup>8</sup> This represents a 10 percent reduction below 2005 total emission levels. Of the four major sectors nationwide - residential, commercial, industrial, and transportation - transportation accounts for the highest fraction of GHG emissions (approximately 34 percent of emissions from these four sectors); these emissions are entirely generated from direct fossil fuel combustion. Over 60 percent of the transportation emissions resulted from passenger car and light-duty truck use. The remaining emissions came from other transportation activities, including the combustion of diesel-fuel in medium- and heavy-duty vehicles and jet fuel in aircraft. According to Inventory of US Greenhouse Gas Emissions and Sinks,<sup>9</sup> from 2005 to 2012 transportation emissions dropped by 9 percent due, in part, to increased fuel efficiency across the U.S. vehicle fleet, as well as higher fuel prices, and an associated decrease in the demand for passenger transportation. However, from 1990 to 2012 as a whole, transportation emissions rose by 16 percent, principally because of “increased demand for travel within limited gains in fuel efficiency” across the U.S. vehicle fleet.<sup>10</sup>

In 2012, California emitted approximately 459 million tons of CO<sub>2</sub>e, or about 7 percent of the U.S. emissions.<sup>11</sup> California’s percentage contribution is due primarily to the sheer size of California, as compared to other states. For example in 2011 (the most recently compiled data available), California had the fifth lowest per capita GHG emission rates in the country (including Washington DC),<sup>12</sup> due to the success of its energy-efficiency and renewable energy programs and commitments that have lowered the State’s GHG emissions rate of growth.<sup>13</sup> Another factor that has reduced California’s fuel use and GHG emissions is its mild climate compared to that of many other states.

The California Energy Commission (CEC) found that transportation is the source of approximately 41 percent of the State’s GHG emissions, followed by electricity generation (both in-state and out-of-state) at 23 percent, and industrial sources at 20 percent. Agriculture and forestry is the source of approximately 8.3 percent of the State’s GHG emissions. The source category “other,” which includes residential and commercial activities, also comprised approximately 8.3 percent of the inventory.

The construction and operation of developments, such as this Specific Plan, cause GHG emissions. Operational phase GHG emissions result from energy use associated with heating, lighting and powering buildings (typically through natural gas and electricity consumption), pumping and processing water, fuel used for transportation, and decomposition of waste

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<sup>8</sup> U.S. Census Bureau. Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2012 (NST-EST2012-01). September 2013. Available at: <http://www.census.gov/popest/data/national/totals/2012/index.html>. Accessed: February 2015.

<sup>9</sup> USEPA. 2014. Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2012. Available at: <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>. Accessed: February 2015.

<sup>10</sup> USEPA. 2014. Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2012. Available at: <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>. Accessed: February 2015.

<sup>11</sup> CARB. 2014. California Greenhouse Gas Inventory: 2000-2012. Available at: [http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg\\_inventory\\_00-12\\_report.pdf](http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf). Accessed: February 2015.

<sup>12</sup> World Resources Institute, CAIT 2.0, 2014. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC. Available at: <http://cait2.wri.org/>. Accessed: February 2015.

<sup>13</sup> The Center for Resource Efficient Communities. 2013. Residential Energy Use and GHG Emissions Impact of compact Land Use Types. Report to ARB, Contract No. 10-323. Available at: <http://www.arb.ca.gov/research/apr/past/10-323h.pdf>. Accessed: February 2015.

associated with building occupants. New development can also create GHG emissions in its construction and demolition phases, including the use of fuels in construction equipment, creation, and decomposition of building materials, vegetation clearing, natural gas usage, electrical usage, and transportation.

However, it is important to acknowledge that new development does not necessarily create entirely new GHG emissions, since most of the persons who will visit or occupy new development will come from other locations where they were already causing such GHG emissions. Further, it has not been demonstrated that new GHG emissions caused by a local development project can affect global climate change, or that a project's net increase in GHG emissions, if any, when coupled with other activities in the region, would be cumulatively considerable.<sup>14</sup>

### **2.1.1 Potential Effects of Human Activity on Global Climate Change**

Globally, climate change has the potential to impact numerous environmental resources through anticipated, though uncertain, impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming is taking place, including substantial loss of ice in the Arctic.<sup>15</sup>

However, the understanding of GHG emissions, particulate matter, and aerosols on global climate trends is complex and involves varying uncertainties and a balance of different effects. In addition to uncertainties about the extent to which human activity rather than solar or volcanic activity is responsible for increasing warming, there is also evidence that some human activity has cooling, rather than warming, effects, as discussed in detail in numerous publications by the International Panel on Climate Change (IPCC), such as the Fifth Assessment Report (AR5) Working Group 1 Report "The Physical Science Basis".<sup>16, 17</sup> Nonetheless, when all effects and uncertainties are considered together, the consensus is that human activity has contributed significantly to global warming. As stated in the AR5 discussion of Attribution of Climate

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<sup>14</sup> CAPCOA, 2008. CEQA & Climate Change. p. 35. January. Available at: <http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf>. Accessed: February 2015.

<sup>15</sup> International Panel on Climate Change (IPCC) Fifth Assessment Report. Climate Change 2013: Working Group I Report: The Physical Science Basis. 2013. Available at: [http://www.climatechange2013.org/images/report/WG1AR5\\_SPM\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf). Accessed: February 2015.

<sup>16</sup> The IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to assess scientific, technical, and socio-economic information relevant for the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC has produced a series of Assessment Reports comprised of full scientific and technical assessments of climate change. The first assessment report (FAR) was developed in 1990. The Fifth Assessment report (AR5) is under development.

<sup>17</sup> International Panel on Climate Change (IPCC) Fifth Assessment Report. Climate Change 2013: Working Group I Report: The Physical Science Basis. 2013. Figure SPM.5. Available at: [http://www.climatechange2013.org/images/report/WG1AR5\\_SPM\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf). Accessed: March 2015.

Change, “It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.”<sup>18</sup>

Acknowledging uncertainties regarding the rate at which anthropogenic GHG emissions would continue to increase (based upon various factors under human control, such as future population growth and the locations of that growth; the amount, type, and locations of economic development; the amount, type, and locations of technological advancement; adoption of alternative energy sources; legislative and public initiatives to curb emissions; and public awareness and acceptance of methods for reducing emissions), and the impact of such emissions on climate change, the IPCC devises emission scenarios which utilize various assumptions about the rates of economic development, population growth, and technological advancement over the course of the next century. For the AR5, a set of four new scenarios, denoted Representative Concentration Pathways (RCP), were developed. RCPs are based on a combination of integrated assessment models, simple climate models, atmospheric chemistry and global carbon cycle models. The four RCPs include a mitigation scenario, two stabilizing scenarios, and one scenario with very high GHG emissions. “The RCPs can thus represent a range of 21st century climate policies, as compared with the no-climate policy of the Special Report on Emissions Scenarios used in the AR3 and the AR4.”<sup>19</sup>

The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects, according to the IPCC.<sup>20</sup>

- It is very likely that the Arctic sea ice cover will continue to shrink and thin and that Northern Hemisphere spring snow cover will decrease during the 21st century as global mean surface temperature rises. Global glacier volume will further decrease;
- It is virtually certain that there will be more frequent hot and fewer cold temperature extremes over most land areas on daily and seasonal timescales as global mean temperatures increase. It is very likely that heat waves will occur with a higher frequency and duration. Occasional cold winter extremes will continue to occur;
- Global surface temperature change for the end of the 21st century is likely to exceed 1.5°C relative to 1850 to 1900 for all RCP scenarios except the mitigation scenario. It is likely to exceed 2°C for the highest forcing scenario and one stabilizing scenario, and more likely than not to exceed 2°C for the remaining stabilizing scenario. Warming will continue beyond 2100 under all RCP scenarios except the mitigation scenario;

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<sup>18</sup> International Panel on Climate Change (IPCC) Fifth Assessment Report. Climate Change 2013: Working Group I Report: The Physical Science Basis. Summary for Policymakers. Detection and Attribution of Climate Change. Available at: [http://www.climatechange2013.org/images/report/WG1AR5\\_SPM\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf). Accessed: February 2015.

<sup>19</sup> International Panel on Climate Change (IPCC) Fifth Assessment Report. Climate Change 2013: Working Group I Report: The Physical Science Basis. Summary for Policymakers. Detection and Attribution of Climate Change. Box SPM.1. Available at: [http://www.climatechange2013.org/images/report/WG1AR5\\_SPM\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf). Accessed: February 2015.

<sup>20</sup> International Panel on Climate Change (IPCC) Fifth Assessment Report. Climate Change 2013: Working Group I Report: The Physical Science Basis. Summary for Policymakers. Available at: [http://www.climatechange2013.org/images/report/WG1AR5\\_SPM\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf). Accessed: February 2015.



- The global ocean will continue to warm during the 21st century. Heat will penetrate from the surface to the deep ocean and affect ocean circulation;
- Climate change will affect carbon cycle processes in a way that will exacerbate the increase of CO<sub>2</sub> in the atmosphere (*high confidence*). Further uptake of carbon by the ocean will increase ocean acidification;
- Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions;
- Global mean sea level will continue to rise during the 21<sup>st</sup> century; and
- Cumulative emissions of CO<sub>2</sub> largely determine global mean surface warming by the late 21st century and beyond. Most aspects of climate change will persist for many centuries even if emissions of CO<sub>2</sub> are stopped.

Potential secondary effects from global warming include global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

## **2.1.2 Potential Effects of Climate Change on State of California**

According to the California Air Resources Board (CARB), some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years.<sup>21</sup> Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists' understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically valid conclusions on a localized scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts. In addition, projecting regional impacts of climate change and variability relies on large-scale scenarios of changing climate parameters, using information that is typically at too general a scale to make accurate regional assessments.<sup>22</sup>

Below is a summary of some of the potential effects reported in an array of studies that could be experienced in California as a result of global warming and climate change.

### **2.1.2.1 Air Quality**

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. For other pollutants, the effects of climate change and/or weather are less well studied, and even less well understood. If higher

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<sup>21</sup> California Air Resources Board (CARB), 2006. Public Workshop to Discuss Establishing the 1990 Emissions Level and the California 2020 Limit and Developing Regulations to Require Reporting of Greenhouse Gas Emissions, Sacramento, CA. December 1.

<sup>22</sup> Kiparsky, M. and P.H. Gleick, 2003. Climate Change and California Water Resources: A Survey and Summary of the Literature. Oakland, CA: Pacific Institute for Studies in Development. July 2003.

temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State.<sup>23</sup>

### 2.1.2.2 Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. For example, models that predict drier conditions suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions project increased reservoir inflows and storage, and increased river flows.<sup>24</sup>

A July 2006 technical report prepared by the California Department of Water Resources (DWR) addresses the State Water Project, the Central Valley Project, and the Sacramento-San Joaquin Delta. Although the report projects that, “[c]limate change will likely have a significant effect on California’s future water resources ... [and] future water demand,” it also reports that, “there is much uncertainty about future water demand, especially those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain. This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood.”<sup>25</sup> DWR adds that “[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future.”<sup>26</sup> Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.<sup>27</sup>

### 2.1.2.3 Hydrology

As discussed above, climate change could potentially affect the following: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be

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<sup>23</sup> California Climate Change Center (CCCC), 2006. Our Changing Climate: Assessing the Risks to California, CEC500-2006-077, Sacramento, CA. July. Available at: [http://meteora.ucsd.edu/cap/pdffiles/CA\\_climate\\_Scenarios.pdf](http://meteora.ucsd.edu/cap/pdffiles/CA_climate_Scenarios.pdf). Accessed: February 2015.

<sup>24</sup> Brekke, L.D., et al, 2004. —Climate Change Impacts Uncertainty for Water Resources in the San Joaquin River Basin, California. *Journal of the American Water Resources Association*. 40(2): 149–164. Malden, MA, Blackwell Synergy for AWRA.

<sup>25</sup> California Department of Water Resources (DWR), 2006. Progress on Incorporating Climate Change into Management of California Water Resources, Sacramento, CA. July.

<sup>26</sup> California Department of Water Resources (DWR), 2006. Progress on Incorporating Climate Change into Management of California Water Resources, Sacramento, CA. July.

<sup>27</sup> Kiparsky 2003, op. cit.; DWR, 2005, op. cit.; Cayan, D., et al, 2006. Scenarios of Climate Change in California: An Overview (White Paper, CEC-500-2005-203-SF), Sacramento, CA. February.



a product of global warming through two main processes -- expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could also jeopardize California's water supply. In particular, saltwater intrusion would threaten the quality and reliability of the state's major fresh water supply that is pumped from the southern portion of the Sacramento/San Joaquin River Delta. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

#### **2.1.2.4 Agriculture**

California has a \$30 billion agricultural industry that produces half the country's fruits and vegetables. The California Climate Change Center (CCCC) notes that higher CO<sub>2</sub> levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase, crop-yield could be threatened by a less reliable water supply, and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year that certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.<sup>28</sup>

#### **2.1.2.5 Ecosystems and Wildlife**

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. In 2004, the Pew Center on Global Climate Change released a report examining the possible impacts of climate change on ecosystems and wildlife.<sup>29</sup> The report outlines four major ways in which it is thought that climate change could affect plants and animals: (1) timing of ecological events, (2) geographic range, (3) species' composition within communities, and (4) ecosystem processes such as carbon cycling and storage.

### **2.2 Regulatory Setting**

The following regulations relate to the calculation of the Specific Plan's GHG emissions.

#### **2.2.1 Federal**

##### **Supreme Court Ruling in Massachusetts et al. v. Environmental Protection Agency**

The Bush Administration's approach to addressing climate change was challenged in *Massachusetts et al. v. Environmental Protection Agency*, 549 US 497 (2007). In this decision, the U.S. Supreme Court held that the USEPA was authorized by the Clean Air Act to regulate CO<sub>2</sub> emissions from new motor vehicles.<sup>30</sup> The Court did not mandate that the USEPA enact regulations to reduce GHG emissions, but found that the only instances in which the USEPA could avoid taking action were if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

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<sup>28</sup> California Climate Change Center (CCCC), 2006, op. cit.

<sup>29</sup> Parmesan, C. and H. Galbraith, Observed Impacts of Global Climate Change in the U.S., Arlington, VA: Pew Center on Global Climate Change, November 2004.

<sup>30</sup> Massachusetts, et al. v. Environmental Protection Agency (2007). Available at: <http://www.law.cornell.edu/supct/html/05-1120.ZS.html>. Accessed: February 2015.

On December 7, 2009, the USEPA issued an “endangerment finding” under the Clean Air Act, concluding that GHGs threaten the public health and welfare of current and future generations and that motor vehicles contribute to greenhouse gas pollution.<sup>31</sup> These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under the federal Clean Air Act. The USEPA's endangerment finding paves the way for federal regulation of GHGs.

It was expected that Congress would enact GHG legislation, primarily for a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate were controversial and it may be some time before Congress adopts major climate change legislation. Under the Consolidated Appropriations Act of 2008 (HR 2764), Congress has established mandatory GHG reporting requirements for some emitters of GHGs. In addition, on September 22, 2009, the USEPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the USEPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 MT or more a year of GHGs.

### **2.2.1.1 Mobile Sources**

#### United States Environmental Protection Agency and National Highway Traffic Safety Administration Joint Rulemaking for Vehicle Standards

In response to the *Massachusetts v. EPA* ruling discussed above, the Bush Administration issued an Executive Order on May 14, 2007, directing the USEPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.

On October 10, 2008, the NHTSA released a final environmental impact statement analyzing proposed interim standards for passenger cars and light trucks in model years 2011 through 2015. The NHTSA issued a final rule for model year 2011 on March 30, 2009.<sup>32</sup>

On May 7, 2010, the USEPA and the NHTSA issued a final rule regulating fuel efficiency and GHG pollution from motor vehicles for cars and light-duty trucks for model years 2012–2016.<sup>33</sup> On May 21, 2010, President Obama issued a memorandum to the Secretaries of Transportation and Energy, and the Administrators of the USEPA and the NHTSA calling for establishment of additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure.<sup>34</sup> In response to this directive, USEPA and NHTSA issued a

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<sup>31</sup> United States Environmental Protection Agency, Endangerment, and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Available at: <http://www.epa.gov/climatechange/endangerment/>. Accessed: March 2015.

<sup>32</sup> National Highway Traffic Safety Administration, Laws & Regulations, CARE - Fuel Economy, Average Fuel Economy Standards Passenger Cars and Light Trucks Model Year 2011, Final Rule, March 23, 2009. Available at: [http://www.nhtsa.gov/DOT/NHTSA/Rulemaking/Rules/Associated%20Files/CAFE\\_Updated\\_Final\\_Rule\\_MY2011.pdf](http://www.nhtsa.gov/DOT/NHTSA/Rulemaking/Rules/Associated%20Files/CAFE_Updated_Final_Rule_MY2011.pdf). Accessed: March 2015.

<sup>33</sup> United States Environmental Protection Agency, Light Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, Final Rule, May 7, 2010. Available at: <https://www.federalregister.gov/articles/2010/05/07/2010-8159/light-duty-vehicle-greenhouse-gas-emission-standards-and-corporate-average-fuel-economy-standards>. Accessed: March 2015.

<sup>34</sup> Government Printing Office, Federal Register, Vol. 75, No. 101, Presidential Documents, Improving Energy Security, American Competitiveness and Job Creation, and Environmental Protection Through a Transformation of

Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal greenhouse gas and fuel economy standards for model year 2017-2025 light-duty vehicles.<sup>35</sup> The agencies proposed standards projected to achieve 163 grams/mile of CO<sub>2</sub> in model year 2025, on an average industry fleet wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. California has announced its support of this national program.<sup>36</sup> The final rule was adopted in October 2012, and NHTSA intends to set standards for model years 2022-2025 in a future rulemaking.<sup>37, 38</sup>

### Heavy-Duty Engines and Vehicles Fuel Efficiency Standards

In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the USEPA and the NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles from model year 2014-2018.<sup>39</sup> USEPA and NHTSA have adopted standards for CO<sub>2</sub> emissions and fuel consumption, respectively, tailored to each of three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to USEPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 6 percent to 23 percent over the 2010 baselines.

These emissions reductions were not included in the Specific Plan emissions inventory due to the difficulty in quantifying the reductions consistent with other analysis assumptions. Excluding these reductions results in a more conservative (i.e., higher) Specific Plan emissions inventory.

### Energy Independence and Security Act

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law.<sup>40</sup> Among other key measures, the Act will do the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

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Our Nation's Fleet of Cars and Trucks, May 21, 2010. Available at: <http://www.gpo.gov/fdsys/pkg/FR-2010-05-26/html/2010-12757.htm>. Accessed: March 2015.

<sup>35</sup> Government Printing Office, Federal Register, Vol. 76, No. 153, Proposed Rules, 2017-2025 Model Year Light-Duty Vehicle GHG Emissions and CAFÉ Standards: Supplemental Notice of Intent, August 9, 2011. Available at: <http://gpo.gov/fdsys/pkg/FR-2011-08-09/pdf/2011-19905.pdf>. Accessed: March 2015.

<sup>36</sup> California Air Resource Board, *Commitment Letter to National Program*, July 28, 2011. Available at: <http://www.epa.gov/otaq/climate/letters/carb-commitment-ltr.pdf>. Accessed: March 2015.

<sup>37</sup> National Highway Traffic Safety Administration, Federal Register, Vol. 77, No. 199, Rules & Regulations, 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, effective December 14, 2012. Available at: <https://federalregister.gov/a/2012-21972>. Accessed: March 2015.

<sup>38</sup> National Highway Traffic Safety Administration, Corporate Average Fuel Economy Standards, Passenger Cars and Light Trucks, Model Years 2017-2025, Final Environmental Impact Statement, July 2012. Available at: [http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/FINAL\\_EIS.pdf](http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/FINAL_EIS.pdf). Accessed: March 2015.

<sup>39</sup> USEPA. 2011. Office of Transportation and Air Quality. EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium-and Heavy-Duty Vehicles. August. Available at: <http://www.epa.gov/otaq/climate/documents/420f11031.pdf>. Accessed: March 2015.

<sup>40</sup> GPO. 2007. Energy Independence and Security Act of 2007. January 4. Available at: <http://www.gpo.gov/fdsys/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf>. Accessed: March 2015.

- Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.
- Require approximately 25 percent greater efficiency for light bulbs, by phasing out the incandescent light bulbs between 2012 and 2014; require approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.
- While superseded by NHTSA and USEPA actions described above, EISA also set mpg targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

## **2.2.2 State**

### **Executive Order S-3-05**

On June 1, 2005, Governor Schwarzenegger signed Executive Order S-3-05, which established the following GHG emission reduction goals for California: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and, by 2050, reduce GHG emissions to 80 percent below 1990 levels. It also instructed the Secretary of the California Environmental Protection Agency to coordinate with other state agencies and report to the Governor and Legislature by January 2006 (and biannually thereafter) on progress made toward meeting the specified GHG emission reduction goals and the impacts of global climate change on California.

In adopting the 2006 Global Warming Solutions Act (AB 32), the Legislature did not include the Executive Order’s 2050 horizon-year goal, but rather exclusively codified the 2020 goal; and, in the last legislative session, the Legislature rejected proposals to legislatively enact the 2050 goal.<sup>41</sup>

### **Assembly Bill 32 (Statewide GHG Reductions)**

The California Global Warming Solutions Act of 2006 (AB 32) was signed into law in September 2006 after considerable study and expert testimony before the Legislature. The law instructs the CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The Act directed CARB to set a GHG emission limit based on 1990

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<sup>41</sup> See *Cleveland National Forest Foundation v. San Diego Association of Governments* (2014) 231 Cal.App.4th 1056, 1096; *Professional Engineers in California Government v. Schwarzenegger* (2010) 50 Cal.4th 989, 1015; Office of Planning and Research, *Guide to the California State Executive Branch* (Oct. 2004), p. 8.

levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.<sup>42</sup>

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. The bill required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. CARB accomplished the key milestones set forth in AB 32 including the following:

- June 30, 2007. Identification of discrete early action GHG emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures.<sup>43</sup> These were later supplemented by adding six other discrete early action measures.<sup>44</sup>
- January 1, 2008. Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level and adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.<sup>45</sup>
- January 1, 2009. Adoption of a scoping plan for achieving GHG emission reductions. On December 11, 2008, CARB adopted Climate Change Scoping Plan: A Framework for Change (Scoping Plan), discussed in more detail below.<sup>46</sup>
- January 1, 2010. Adoption and enforcement of regulations to implement the “discrete” actions. Several early action measures have been adopted and became effective on January 1, 2010.<sup>47, 48</sup>
- January 1, 2011. Adoption of GHG emissions limits and reduction measures by regulation. On October 28, 2010, CARB released its proposed cap-and-trade regulations, which would

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<sup>42</sup> Legislative Counsel of California, *California Assembly Bill 32*, September 2006. Available at: [http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab\\_0001-0050/ab\\_0001-0050\\_ab\\_32\\_bill\\_20060927\\_chaptered.pdf](http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_0001-0050_ab_32_bill_20060927_chaptered.pdf). Accessed: March 2015.

<sup>43</sup> California Air Resources Board, Summary of Board Meeting, Consideration of Recommendations for Discrete Early Actions for Climate Change Mitigation in California, June 21-22, 2007. Available at: <http://www.arb.ca.gov/board/ms/2007/ms062107.pdf>. Accessed: March 2015.

<sup>44</sup> California Air Resources Board, Summary of Board Meeting, Public Meeting to Consider Approval of Additions to Reduce Greenhouse Gas Emissions under the California Global Warming Solutions Act of 2006 and to Discuss Concepts for Promoting and Recognizing Voluntary Early Actions, October 25-26, 2007. Available at: <http://www.arb.ca.gov/board/ms/2007/ms102507.pdf>. Accessed: March 2015.

<sup>45</sup> California Air Resources Board, *Staff Report, California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit*, November 16, 2007. Available at: [http://www.arb.ca.gov/cc/inventory/pubs/reports/staff\\_report\\_1990\\_level.pdf](http://www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf). Accessed: March 2015.

<sup>46</sup> California Air Resources Board, *Climate Change Scoping Plan*, December 2008. Available at: [http://www.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf). Accessed: March 2015.

<sup>47</sup> California Air Resources Board, Summary of Board Meeting, Consideration of Recommendations for Discrete Early Actions for Climate Change Mitigation in California, June 21-22, 2007. Available at: <http://www.arb.ca.gov/board/ms/2007/ms062107.pdf>. Accessed: March 2015.

<sup>48</sup> California Air Resources Board, Summary of Board Meeting, Public Meeting to Consider Approval of Additions to Reduce Greenhouse Gas Emissions under the California Global Warming Solutions Act of 2006 and to Discuss Concepts for Promoting and Recognizing Voluntary Early Actions, October 25-26, 2007. Available at: <http://www.arb.ca.gov/board/ms/2007/ms102507.pdf>. Accessed: March 2015.

cover sources of approximately 85 percent of California's GHG emissions.<sup>49</sup> CARB's Board ordered CARB's Executive Director to prepare a final regulatory package for cap-and-trade on December 16, 2010.<sup>50</sup>

- January 1, 2012. GHG emissions limits and reduction measures adopted in 2011 become enforceable.

As noted above, on December 11, 2008, CARB adopted the Scoping Plan (2008 Scoping Plan) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various categories of emissions. CARB determined that achieving the 1990 emission level would require a reduction of GHG emissions of by approximately 28.5 percent to achieve in 2020 emissions levels in the absence of new laws and regulations (referred to as "business as usual" or "No Action Taken" (NAT). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include.<sup>51</sup>

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In connection with preparation of the 2011 Supplement to the Functional Equivalent Document (2011 FED), CARB released revised estimates of the expected 2020 emission reductions in consideration of the economic recession and the availability of updated information from development of measure-specific regulations. Incorporation of revised estimates in

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<sup>49</sup> California Air Resources Board, *Proposed Regulation to Implement the California Cap-and-Trade Program*, December 21, 2011. Available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>. Accessed: March 2015.

<sup>50</sup> California Air Resources Board, *California Cap-and-Trade Program, Resolution 10-42*, December 16, 2010. Available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/res1042.pdf>. Accessed: March 2015.

<sup>51</sup> California Air Resources Board, *Climate Change Scoping Plan*, December 2008. Available at: [http://www.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf). Accessed: March 2015.



consideration of the economic recession reduced the projected 2020 emissions from 596 metric tons of CO<sub>2</sub> equivalent (MTCO<sub>2</sub>e) to 545 MMTCO<sub>2</sub>e.<sup>52</sup> After accounting for the recession data, achieving the 1990 emissions level would require a reduction of GHG emissions of 118 MMTCO<sub>2</sub>e, or 21.7 percent (down from 28.5 percent), to achieve in 2020 emissions levels in the “business as usual” condition. The 2020 emissions estimate was also updated to account for measures incorporated into the inventory, including Pavley (vehicle model-years 2009 - 2016) and the renewable portfolio standard (12% - 20%). Inclusion of these measures further reduced the 2020 baseline to 507 MMTCO<sub>2</sub>e. As a result, based on both the economic recession and the availability of updated information from development of measure-specific regulations, achieving the 1990 emission level would now require a reduction of GHG emissions of 80 MMTCO<sub>2</sub>e or a reduction by approximately 16 percent (down from 28.5 percent) to achieve in 2020 emissions levels in the “business as usual” or NAT condition.<sup>53, 54</sup>

In May 2014, CARB adopted the First Update to the Scoping Plan (2014 Scoping Plan). The First Update recalculated 1990 GHG emissions using IPCC Fourth Assessment Report released in 2007. Using the AR4 global warming potentials GWPs, the 427 MMTCO<sub>2</sub>e 1990 emissions level and 2020 GHG emissions limit would be slightly higher, at 431 MMTCO<sub>2</sub>e.<sup>55</sup> Based on the revised estimates of expected 2020 emissions identified in the 2011 Supplement to the Functional Environmental Document and updated 1990 emissions levels identified in the First Update to the Scoping Plan, achieving the 1990 emission level would require a reduction of 76 MMTCO<sub>2</sub>e (down from 507 MMTCO<sub>2</sub>e) or a reduction by approximately 15 percent (down from 28.5 percent) to achieve in 2020 emissions levels in the “business as usual” or NAT condition.<sup>56, 57, 58</sup>

### Executive Order B-30-15

On April 29, 2015, Governor Brown signed Executive Order B-30-15, which established an interim GHG emission reduction target for California: by 2030, reduce GHG emissions to 40 percent below 1990 levels. This Executive Order also directed all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030

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<sup>52</sup> California Air Resources Board, *Status of Scoping Plan Recommended Measures*, July 25, 2011. Available at: [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf). Accessed: March 2015.

<sup>53</sup> California Air Resources Board, *Status of Scoping Plan Recommended Measures*, July 25, 2011. Available at: [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf). Accessed: March 2015.

<sup>54</sup> California Air Resources Board, *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document* Available at: [http://www.arb.ca.gov/cc/scopingplan/document/final\\_supplement\\_to\\_sp\\_fed.pdf](http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf). Accessed: March 2015.

<sup>55</sup> California Air Resources Board, *Climate Change Scoping Plan First Update, Discussion Draft for Public Review and Comment*, October 2013 Available at: [http://www.arb.ca.gov/cc/scopingplan/2013\\_update/discussion\\_draft.pdf](http://www.arb.ca.gov/cc/scopingplan/2013_update/discussion_draft.pdf). Accessed: March 2015.

<sup>56</sup> California Air Resources Board, *Status of Scoping Plan Recommended Measures*, July 25, 2011. Available at: [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf). Accessed: February 2015.

<sup>57</sup> California Air Resources Board, *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document* Available at: [http://www.arb.ca.gov/cc/scopingplan/document/final\\_supplement\\_to\\_sp\\_fed.pdf](http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf). Accessed: February 2015.

<sup>58</sup> California Air Resources Board, *Climate Change Scoping Plan First Update, Discussion Draft for Public Review and Comment*, October 2013 Available at: [http://www.arb.ca.gov/cc/scopingplan/2013\\_update/discussion\\_draft.pdf](http://www.arb.ca.gov/cc/scopingplan/2013_update/discussion_draft.pdf). Accessed: February 2015.

goal, as well as the pre-existing, long-term 2050 goal identified in Executive Order S-3-05 (see discussion above). Additionally, this Executive Order directed CARB to update its Climate Change Scoping Plan (see above discussion of Assembly Bill 32) to address the 2030 goal.

### **2.2.2.1 Energy-Related Sources**

#### **Renewable Portfolio Standards (SB 1078, SB 107, and SBX1-2)**

Established in 2002 under Senate Bill (SB) 1078, and accelerated in 2006 under SB 107 and again in 2011 under SBX1-2, California's RPS requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020.<sup>59, 60, 61</sup> The 33 percent standard is consistent with the RPS goal established in the Scoping Plan.<sup>62</sup> As interim measures, the RPS requires 20 percent of retail sales to be sourced from renewable energy by 2013, and 25 percent by 2016. Initially, the RPS provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly-owned utilities to the entities subject to RPS.<sup>63</sup> The expected growth in RPS to meet the standards in effect in 2008 is not reflected in the "business as usual" (BAU) calculation in the AB 32 Scoping Plan, discussed below. In other words, the Scoping Plan's BAU 2020 does not take credit for implementation of RPS that occurred after its adoption.<sup>64</sup>

#### **GHG Emissions Standard for Baseload Generation (SB 1368)**

Senate Bill 1368 (SB 1368) (September 29, 2006) prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant. This performance standard applies to electricity generated both within and outside of California, and to publicly-owned as well as investor-owned electric utilities.

### **2.2.2.2 Mobile Sources**

#### **Mobile Source Reductions (AB 1493)**

Assembly Bill 1493 ("the Pavley Standard" or AB 1493) required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and

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<sup>59</sup> Legislative Counsel of California, *Senate Bill 1078*, September 2002. Available at: <http://www.energy.ca.gov/portfolio/documents/documents/SB1078.PDF>. Accessed: February 2015.

<sup>60</sup> Legislative Counsel of California, *Senate Bill 1368*, September 2006. Available at: [http://www.energy.ca.gov/emission\\_standards/documents/sb\\_1368\\_bill\\_20060929\\_chaptered.pdf](http://www.energy.ca.gov/emission_standards/documents/sb_1368_bill_20060929_chaptered.pdf). Accessed: February 2015.

<sup>61</sup> California Air Resources Board, et al., v. Association of Irrigated Residents, et al., (2011). Available at: [http://www.crpe-ej.org/crpe/images/stories/7.25.11\\_Petition\\_for\\_Review\\_FINAL\\_with\\_Exhibits\\_smaller\\_version.pdf](http://www.crpe-ej.org/crpe/images/stories/7.25.11_Petition_for_Review_FINAL_with_Exhibits_smaller_version.pdf). Accessed: February 2015.

<sup>62</sup> California Air Resources Board, *Climate Change Scoping Plan*, December 2008. Available at: [http://www.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf). Accessed: February 2015.

<sup>63</sup> California Air Resources Board, et al., v. Association of Irrigated Residents, et al., 2011. Available at: [http://www.crpe-j.org/crpe/images/stories/7.25.11\\_Petition\\_for\\_Review\\_FINAL\\_with\\_Exhibits\\_smaller\\_version.pdf](http://www.crpe-j.org/crpe/images/stories/7.25.11_Petition_for_Review_FINAL_with_Exhibits_smaller_version.pdf). Accessed: February 2015.

<sup>64</sup> California Air Resources Board, *Climate Change Scoping Plan Appendices, Vol. I*, December 2008. Available at: [http://www.arb.ca.gov/cc/scopingplan/document/appendices\\_volume1.pdf](http://www.arb.ca.gov/cc/scopingplan/document/appendices_volume1.pdf). Accessed: February 2015.



light-duty trucks of model year 2009 through 2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits. The bill authorizes CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2004, CARB applied to the USEPA for a waiver under the federal Clean Air Act to authorize implementation of these regulations. The waiver request was formally denied by the USEPA in December 2007 after California filed suit to prompt federal action. In January 2008, the State Attorney General filed a new lawsuit against the USEPA for denying California's request for a waiver to regulate and limit GHG emissions from these vehicles. In January 2009, President Barack Obama issued a directive to the USEPA to reconsider California's request for a waiver. On June 30, 2009, the USEPA granted the waiver to California for its GHG emission standards for motor vehicles. As part of this waiver, USEPA specified the following provision: CARB may not hold a manufacturer liable or responsible for any noncompliance caused by emission debits generated by a manufacturer for the 2009 model year.

CARB has adopted a new approach to passenger vehicles (cars and light trucks), by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. These standards will apply to all passenger and light duty trucks used by customers, employees of and deliveries to the Specific Plan.

#### Low Carbon Fuel Standard

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009 (CARB 2009).<sup>65</sup> In 2009, CARB approved for adoption the LCFS regulation, which became fully effective in April 2010 and is codified at Title 17, CCR, Sections 95480-95490. The LCFS will reduce greenhouse gas emissions by reducing the carbon intensity of transportation fuels used in California by at least 10 percent by 2020. Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel.

On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the district court's rulings preliminarily enjoined the CARB from enforcing the regulation. In January 2012, CARB appealed that decision to the Ninth Circuit Court of Appeals. On September 18, 2013, the Ninth Circuit issued its decision affirming the District Court's conclusion that LCFS ethanol and initial crude-oil provisions are not facially discriminatory, but remanded to the district court to

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<sup>65</sup> California Air Resources Board, Initial Statement of Reason for Proposed Regulation for The Management of High Global Warming Potential Refrigerant for Stationary Sources, October 23, 2009. Available at: <http://www.arb.ca.gov/regact/2009/gwprmp09/isorref.pdf>. Accessed: March 2015.

determine whether the LCFS ethanol provisions are discriminatory in purpose and effect. Additionally, the Ninth Circuit remanded to the District Court with instructions to vacate the preliminary injunction against CARB's enforcement of the regulation.

In a mostly-published 95-page opinion filed July 15, 2013, the Fifth District Court of Appeal reversed a trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of the CARB approving LCFS regulations promulgated to reduce GHG emissions. (POET, LLC v. CARB (2013) 217 Cal.App.4th 1214.) However, despite its finding that CARB's actions "ran afoul of several procedural requirements imposed by CEQA and the APA" and that "these procedural violations are not trivial," the Court tailored its remedy to protect the public interest by "allow[ing] the LCFS regulations to remain operative while [C]ARB complies with the procedural requirements it failed to satisfy." It stated: "In other words, we will avoid the irony of violations of an environmental protection statute being used to set aside a regulation that restricts the release of pollutants into the environment."

#### Advanced Clean Cars<sup>66</sup>

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

### **2.2.2.3 Building Standards**

#### Green Building Code (California Code of Regulations, Title 24)

In general, Title 24, Part 6, requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

Energy Conservation Standards for new residential and commercial buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977. The most recently revised standards, which are now referred to as Building Energy Efficiency Standards, were adopted in 2013 by the California Energy Commission (Title 24 CCR Part 6 [CCR, 2013]). The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction.<sup>67</sup> The standards, which took effect on July 1, 2014, offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

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<sup>66</sup> CARB. California's Advanced Clean Cars Program. Available at: [http://www.arb.ca.gov/msprog/consumer\\_info/advanced\\_clean\\_cars/consumer\\_acc.htm](http://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/consumer_acc.htm). Accessed: March 2015.

<sup>67</sup> California Energy Commission. Energy Commission Approves More Efficient Buildings for California's Future, May 31, 2012. Available at: [http://www.energy.ca.gov/releases/2012\\_releases/2012-05-31\\_energy\\_commission\\_approves\\_more\\_efficient\\_buildings\\_nr.html](http://www.energy.ca.gov/releases/2012_releases/2012-05-31_energy_commission_approves_more_efficient_buildings_nr.html). Accessed: March 2015.

The 2006 Appliance Efficiency Regulations (Title 20 CCR §1601-1608), dated December 2006, were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally-regulated appliances and non-federally regulated appliances. While these regulations are now often seen as “business as usual” in California, they do exceed the standards imposed by any other state and reduce GHG emissions by reducing energy demand. The 2013 regulations further reduce GHG emissions associated with these appliances. However, because CalEEMod™ employs energy usage data reported in the Residential Appliance Saturation Survey (RASS) and California Commercial End-Use Survey (CEUS), both of these Appliance Efficiency Regulations were not included in the analysis. Including the 2006 regulations for BAU and the 2013 regulations for Specific Plan will further reduce the Specific Plan’s impact as compared to a CARB 2020 NAT projection.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24 CCR). Part 11 establishes voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Some of these standards have become mandatory in the 2010 edition of the Part 11 Code.<sup>68</sup>

#### **2.2.2.4 Waste Diversion**

##### **California Integrated Waste Management Act of 1989**

The California Integrated Waste Management Act of 1989 (Public Resources Code Sections 40000 et seq.) requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; and (2) diversion of 50 percent of all solid waste on and after January 1, 2000, through source reduction, recycling, and composting facilities.<sup>69</sup> Additionally, jurisdictions are not prohibited from implementing source reduction, recycling, and composting activities designed to exceed these requirements.<sup>70</sup>

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.<sup>71</sup> In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal.<sup>72</sup> CalRecycle conducted several stakeholder workshops and published a discussion document in May 2012

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<sup>68</sup> California Building Standards Commission, *2010 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11*, effective January 1, 2011. Available at: <http://www.bsc.ca.gov/Home/CALGreen.aspx>. Accessed: March 2015.

<sup>69</sup> Cal. Pub. Res. Code § 41780(a).

<sup>70</sup> Cal. Pub. Res. Code § 41780(b).

<sup>71</sup> Cal. Pub. Res. Code § 41780.01(a).

<sup>72</sup> Cal. Pub. Res. Code § 41780.02.

titled California's New Goal: 75 Percent Recycling, which identifies concepts that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020.<sup>73</sup>

### **2.2.2.5 Carbon Markets**

As discussed above, CARB has established a cap-and-trade program<sup>74</sup> that is enforceable and meets the requirements of AB 32. Cap-and-trade is a market based regulation that is designed to reduce GHGs from multiple sources. Cap-and-trade sets a firm limit or “cap” on GHGs and minimizes the compliance costs of achieving AB 32 goals. The program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions. The cap will decline approximately 3 percent each year beginning in 2013. Trading creates incentives to reduce GHGs below allowable levels through investments in clean technologies. With a carbon market, a price on carbon is established for GHGs. Market forces spur technological innovation and investments in clean energy.

As part of the cap-and-trade program, CARB will hold quarterly allowance auctions and reserve sales to allow market participants to acquire allowances directly from CARB. Auction participants apply to participate in an auction or reserve sale or confirm their intent to bid, submit a bid guarantee, and meet financial regulatory requirements in order to participate in an auction or reserve sale. CARB held the first auction in November 2012, and has held six subsequent auctions.

CARB also allows the use of compliance offsets in the cap-and-trade program.<sup>75</sup> The current CARB-approved Offset Project Registries include American Carbon Registry (ACR)<sup>76</sup> and Climate Action Reserve (CAR).<sup>77</sup> An offset represents a reduction or removal of GHGs. For the CARB program, these offsets must be measured, quantified, and verified.

The California Air Pollution Control Officers Association (CAPCOA) has also introduced the Greenhouse Gas Reduction Exchange (GHG R<sub>x</sub>).<sup>78</sup> GHG R<sub>x</sub> is intended to provide a trusted source of GHG credits that may be used to mitigate GHG emissions for CEQA and National USEPA purposes. This exchange will operate similarly to the Offset Project Registries discussed above, which will require any credits be measured, quantified, and verified.

## **2.2.3 Regional**

### **2.2.3.1 City of Carlsbad Climate Action Plan**

The City of Carlsbad is in the process of developing a Climate Action Plan (CAP) to reduce the City's GHG emissions. The CAP includes goals, policies, and actions for Carlsbad to reduce GHG emissions and combat climate change, with emission targets through 2035. The horizon year for the CAP corresponds with the horizon year of the City's Draft General Plan, and the

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<sup>73</sup> Available at: <http://www.calrecycle.ca.gov/75percent/Plan.pdf>. Accessed: March 2015.

<sup>74</sup> Information presented here was obtained from CARB. Available at: <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>. Accessed: March 2015.

<sup>75</sup> Available at: <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>. Accessed: March 2015.

<sup>76</sup> Available at: <http://americancarbonregistry.org/>. Accessed: March 2015.

<sup>77</sup> Available at: <http://www.climateactionreserve.org/>. Accessed: March 2015.

<sup>78</sup> Available at: <http://www.ghgrx.org/>. Accessed: February 2015.

criteria are based on a linear trajectory in emission reductions between the state's 2020 and 2050 goals. The community inventory includes emissions from six sectors: residential; commercial; industrial; transportation; solid waste; and wastewater. The CAP estimates emission reduction estimates due to state and federal actions, and General Plan policies and actions. Based on those estimates, the CAP identifies a "gap" that will require further GHG reduction measures. The CAP identifies the following measures to close the emissions "gap," which are generally presented as initiatives for the City to pursue GHG reductions in these areas.

- Residential, commercial and industrial photovoltaic systems;
- Building cogeneration;
- Single-family, multifamily and commercial efficiency retrofits;
- Commercial commissioning;
- CALGreen building code;
- Solar water heater/heat pump installation;
- Efficient light standards;
- Increased zero-emissions vehicle travel;
- Transportation Demand Management;
- Citywide renewable projects; and
- Water delivery and conservation.

The CAP also establishes a Project Review Checklist to assist project proponents in evaluating compliance with the CAP. The Draft CAP was released in March 2014, and has not been adopted at the time of the publication of this report.

## 2.3 Significance Criteria

This GHG Emissions Technical Report assesses the significance of the Specific Plan's GHG emissions using six different methodologies. Each of the six methodologies is a separate and independent ground for the significance determination herein.

First, this report compares the Specific Plan's emissions with the existing GHG emissions associated with the Specific Plan site.

Second, this report analyzes the Specific Plan's consistency with AB 32 through evaluating the Specific Plan's GHG emissions as compared to a CARB 2020 NAT projection. As noted above, in 2011, CARB's Supplement to the 2008 Scoping Plan's Functional Equivalent Document determined that achieving AB 32's goals would require approximately a 21.7 percent reduction as compared to the CARB 2020 NAT projection based on the incorporation of economic recession data.<sup>79, 80</sup> This Technical Report uses this value from CARB (i.e., 21.7%) to determine significance of the Specific Plan's GHG emissions.

Third, this report analyzes the Specific Plan's consistency with AB 32 through evaluating the Specific Plan's GHG emissions as compared to a CARB 2020 NAT projection delineated in CARB's 2014 First Update to the Scoping Plan. Based on the revised estimates of expected 2020 emissions identified in the First Update to the Scoping Plan, which take into account reductions from measures currently in place, achieving the 1990 emission level would require an approximately 15.8 percent reduction from a CARB 2020 NAT projection.<sup>81, 82, 83, 84</sup>

Fourth, this report analyzes the Specific Plan's consistency with SB 375 by comparing the Specific Plan's land use assumptions with the San Diego Association of Governments (SANDAG) 2012 RTP/SCS.

Fifth, this report analyzes the Specific Plan's consistency with the draft City of Carlsbad Climate Action Plan by comparing the EPFs with the CAP's checklist of potential GHG reduction

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<sup>79</sup> CARB. 2011. Attachment D, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. August 19. Available at: [http://www.arb.ca.gov/cc/scopingplan/document/final\\_supplement\\_to\\_sp\\_fed.pdf](http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf). Accessed: February 2015.

<sup>80</sup> CARB. 2011. Status of Scoping Plan Recommended Measures, July 25, 2011. Available at: [http://www.arb.ca.gov/cc/scopingplan/sp\\_measures\\_implementation\\_timeline.pdf](http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf). Accessed: February 2015.

<sup>81</sup> For comparison, the 2008 Scoping Plan calculation of the emissions reductions required by 2020 compared to the BAU condition was 169 MTCO<sub>2</sub>e or 28.5%, calculated using GWPs from the IPCC Second Assessment Report SAR and assuming no reductions in the BAU condition. This was updated to 118 MTCO<sub>2</sub>e, or a reduction of 21.7% taking into account the effects of the economic recession. An estimate which takes into account the reductions due to measures currently in place, including Pavley I and the 20% RPS was published in the Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED 2011). The necessary reduction calculated in the FED was 80 MTCO<sub>2</sub>e or approximately 16% when accounting for both the economic recession and the two referenced regulatory standards.

<sup>82</sup> CARB. Status of Scoping Plan Recommended Measures, July 25, 2011. Available at: [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf). Accessed: March 2015.

<sup>83</sup> CARB. Attachment D, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. Available at: [http://www.arb.ca.gov/cc/scopingplan/document/final\\_supplement\\_to\\_sp\\_fed.pdf](http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf). Accessed: March 2015.

<sup>84</sup> California Air Resources Board, First Update to the Climate Change Scoping Plan. May 2014. Available at: [http://www.arb.ca.gov/cc/scopingplan/2013\\_update/first\\_update\\_climate\\_change\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf). Accessed: March 2015.

measures. Although the CAP is not an applicable plan, because it has not been adopted by the City, the analysis conservatively considers the Specific Plan in relation to the City's draft document.

Sixth, this report evaluates the Specific Plan's consistency with Executive Order B-30-15's goal of reducing statewide GHG emissions to 40% below the 1990 level by the year 2030, and Executive Order S-3-05's goal of reducing statewide GHG emissions to 80% below the 1990 level by the year 2050. Note the Legislature did not adopt the 2050 goal when enacting the AB 32 and in the last legislative session rejected legislation to enact the Executive Order's 2050 goal.<sup>85</sup> Similarly, the Legislature has not adopted the 2030 goal to date.

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<sup>85</sup> See *Cleveland National Forest Foundation v. San Diego Association of Governments* (2014) 231 Cal.App.4th 1056, 1096 (J. Benke, dissenting); *Professional Engineers in California Government v. Schwarzenegger* (2010) 50 Cal.4th 989, 1015; Office of Planning and Research, *Guide to the California State Executive Branch* (Oct. 2004), p. 8.



### 3 Greenhouse Gas Emissions Inventory

This section describes the methodology that ENVIRON International Corporation (ENVIRON) used to develop the GHG emission inventories associated with the Specific Plan, which include one-time emissions (construction emissions and emissions due to vegetation changes), and operational emissions. Sub-categories of GHG operational emissions include: area sources, energy use, water supply and wastewater, solid waste, and mobile sources. The GHG emission inventories reflect the Specific Plan, the CARB 2020 NAT condition as based on the 2011 FED, and the CARB 2020 NAT condition as based on the 2014 Scoping Plan. The primary differences between the CARB 2020 NAT condition for the 2011 FED and the 2014 Scoping Plan are: global warming potentials and assumptions regarding regulatory measures already incorporated. Due to the change in the global warming potentials in these two conditions, the Specific Plan also has a corresponding difference when compared to each of these CARB 2020 NAT conditions. Legislation and rules regarding climate change, as well as the scientific understanding of the extent to which different activities emit GHGs, continue to evolve; as such, the inventories in this report are a reflection of the guidance and knowledge currently available. As discussed above, the GHG emissions inventory for the existing conditions is described in Appendix A.

#### 3.1 Measurement and Resources

##### 3.1.1 Units of measurement: Tonnes of Carbon Dioxide and Carbon Dioxide Equivalents

As discussed in Section 2.1, the term “GHGs” includes gases that contribute to the natural greenhouse effect, such as CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and water, as well as gases that are only man-made and that are emitted through the use of modern industrial products, such as HFCs and chlorofluorocarbons (CFCs). GHG emissions are typically measured in terms of mass of CO<sub>2</sub>e. CO<sub>2</sub>e are calculated as the product of the mass of a given GHG and its specific GWP, as described in Section 2.1.<sup>86</sup> GWPs of 21 and 310 were used for CH<sub>4</sub> and N<sub>2</sub>O respectively for this analysis. In many sections of this report, including the final summary sections, emissions are presented in units of CO<sub>2</sub>e either because the GWPs of CH<sub>4</sub> and N<sub>2</sub>O were accounted for explicitly, or the CH<sub>4</sub> and N<sub>2</sub>O are assumed to contribute a negligible amount of GWP when compared to the CO<sub>2</sub> emissions from that particular emissions category.

In this report, a tonne refers to metric tons (1,000 kilograms). Additionally, exact totals presented in all tables and report sections may not equal the sum of components due to independent rounding of numbers.

#### 3.1.2 Resources

##### 3.1.2.1 CalEEMod™

ENVIRON primarily utilized the California Emission Estimator Model version 2013.2.2 (CalEEMod™)<sup>87</sup> to assist in quantifying the GHG emissions in the inventories presented in this

<sup>86</sup> This report uses GWPs from the IPCC Second Assessment Report since they are used in CalEEMod™. The GWPs in the IPCC Fourth Assessment Report have been updated to 298 for N<sub>2</sub>O and 25 for CH<sub>4</sub>.

<sup>87</sup> SCAQMD, 2013, California Emissions Estimator Model. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.



report for the Specific Plan. CalEEMod™ is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. This model was developed under the auspices of the South Coast Air Quality Management District (SCAQMD) and received input from other California air districts, and is currently supported by several lead agencies for use in quantifying the emissions associated with development projects undergoing environmental review. CalEEMod™ utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors<sup>88</sup>, CARB's on-road and off-road equipment emission models such as the Emission FACtor model (EMFAC) and the Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the CEC and CalRecycle.

CalEEMod™ is based upon the CARB-approved Off-Road and On-Road Mobile-Source Emission Factor models (OFFROAD and EMFAC, respectively), and is designed to estimate construction and operational emissions for land use development projects and allows for the input of project specific information. OFFROAD<sup>89</sup> is an emissions factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment, agricultural equipment). EMFAC<sup>90</sup> is an emissions factor model used to calculate emissions rates from on-road vehicles (e.g., passenger vehicles, haul trucks). The off-road diesel emission factors used by CalEEMod™ are based on the CARB OFFROAD2011 program.

CalEEMod™ provides a simple platform to calculate both construction emissions and operational emissions from a land use project. It calculates both the daily maximum and annual average for criteria pollutants as well as total or annual GHG emissions. The model also provides default values for water and energy use. Specifically the model aids the user in the following calculations:

- Short term construction emissions associated with demolition, site preparation, grading, building, coating, and paving from off-road construction equipment, on-road mobile equipment associated with workers, vendors, and hauling.
- Operational emissions associated with the fully built out land use development, such as on-road mobile vehicle traffic generated by the land uses, off-road emissions from landscaping equipment, wood stoves and hearth usage, natural gas usage in the buildings, electricity usage in the buildings, water usage by the land uses, and solid waste disposal by the land uses.
- One-time vegetation sequestration changes, such as permanent vegetation land use changes and new tree plantings.

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<sup>88</sup> The USEPA maintains a compilation of Air Pollutant Emission Factors and process information for several air pollution source categories. The data is based on source test data, material balance studies, and engineering estimates. Available at: <http://epa.gov/ttnchie1/ap42/>. Accessed: March 2015.

<sup>89</sup> CARB, 2011. Off Road Mobile Source Emission factors. Available at: <http://www.arb.ca.gov/msei/msei.htm>. Accessed: March 2015.

<sup>90</sup> CARB, 2013. EMFAC 2011 Release. Available at: <http://www.arb.ca.gov/msei/modeling.htm>. Accessed: March 2015.

Mitigation impacts to both short-term construction and operational emissions as described in CAPCOA's Quantifying Greenhouse Gas Mitigation Measures.<sup>91</sup> In addition, CalEEMod™ contains default values and existing regulation methodologies to use in each specific local air district region. Appropriate statewide default values can be utilized if regional default values are not defined. ENVIRON used default factors for San Diego County for the GHG emission inventory, unless otherwise noted in the methodology descriptions below.

### **3.1.2.2 Other Resources**

ENVIRON directly or indirectly relied on emissions estimation guidance from government sponsored organizations, government-commissioned studies of energy use patterns, energy surveys by other consulting firms, Specific Plan specific resource management studies (e.g., Traffic study and Water Supply Assessment), and emission estimation software as described above. In cases as noted below, third-party studies were also relied upon to support analyses and assumptions made outside of the approach described above.

### **3.1.3 Indirect Greenhouse Gas Emissions from Electricity Use**

The indirect GHG emissions created as a result of electricity use are based on the following methodology. Indirect emissions, such as when electricity is used in a building, are typically due to electricity generation from offsite power plant locations. For this Specific Plan, electrical power will be supplied to the Specific Plan site by SDG&E.

Using CalEEMod™, the electricity intensities are multiplied by the emission intensity factors for the GHGs and are classified as indirect emissions. Emission intensity factors are GHG emission rates from a given source relative to the intensity of a specific activity in term of the amount of GHG released per megawatt of energy produced. The default electricity intensity for SDG&E in CalEEMod™ for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are 720, 0.029, and 0.00617 pounds (lbs) per megawatt hour, respectively. The CO<sub>2</sub> default factor is based on 2009 emission factor listed in CARB's Local Government Operations Protocol. The CH<sub>4</sub> and N<sub>2</sub>O default factors are based on CARB's and E-Grid values.

For this Specific Plan, the CalEEMod™ CO<sub>2</sub> intensity factor is modified based on the average factor from 2008 and 2009 to account for the RPS. The intensity factors for total energy delivered were estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO<sub>2</sub> emissions per total non-renewable energy metric calculated. Total energy delivery and total CO<sub>2</sub> emissions are provided in SDG&E/Utility Protocol (PUP) Reports. The CO<sub>2</sub> intensity factor presented in this analysis is consistent with the 33% RPS for 2020. The estimate provided here and the PUP reports issued by SDG&E assume that renewable energy sources do not result in any CO<sub>2</sub> emissions. CalEEMod™ emission intensity factors for CH<sub>4</sub> and N<sub>2</sub>O were used for this Specific Plan as a conservative estimate for these emissions.

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<sup>91</sup> CAPCOA. Quantifying Greenhouse Gas Mitigation Measures. August 2010. Available at: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>. Accessed: March 2015.

Details regarding the specific methodologies used by CalEEMod™ can be found in the CalEEMod™ User's Guide and associated appendices.<sup>92</sup> The CalEEMod™ output files are provided for reference in Appendix A to this report.

## **3.2 One-Time Emissions**

One-time emissions are those emissions that are not reoccurring over the life of the Specific Plan. This includes emissions associated with construction and emissions associated with land use changes. The emission estimation methodology for both construction and vegetation changes are described in this section.

### **3.2.1 Construction Emissions**

This section describes the estimation of GHG emissions from construction activities at the Specific Plan Site. While the exact construction schedule and equipment mix may vary from the current analysis, the GHG emissions are not expected to be higher than that estimated given the conservative assumptions included in this analysis. The proposed plan for constructing the Specific Plan is anticipated to happen from 2017 to 2019.

The major construction phases included in this analysis are:

- Demolition: involves tearing down of buildings or structures.
- Site Preparation: involves clearing vegetation (grubbing and tree/stump removal) and stones prior to grading.
- Grading: involves the cut and fill of land to ensure the proper base and slope for the construction foundation.
- Building Construction: involves the construction of structures and buildings.
- Architectural Coating: involves the application of coatings to both the interior and exterior of buildings or structures.
- Paving: involves the laying of concrete or asphalt such as in parking lots or roads.

GHG emissions from these construction phases are largely attributable to fuel use from construction equipment and worker commuting. ENVIRON used CalEEMod™ version 2013.2.2 to assist in quantification of the construction emissions. The construction schedule, off-road equipment lists and equipment specifications, and daily trip counts for workers, vendors, and haul trucks as estimated for the Specific Plan are included in the analysis. CalEEMod™ default values were used for equipment and vehicle emission factors, equipment load factors and vehicle trip lengths.

ENVIRON's analysis was based on a mix of Specific Plan specific estimates and CalEEMod™ defaults for the numbers and types of equipment that will be used in the construction of the Specific Plan as well as the duration of the different construction phases. The GHG calculations are intended to estimate long-term emissions. The construction was assumed to start in 2017

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<sup>92</sup> SCAQMD, 2013, California Emissions Estimator Model User's Guide. Version 2013.2.2 July 2013 Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

and be completed in 2019. The construction land use in acreage, schedule and equipment lists, and grading information, are shown in Tables 2 through 5, respectively.

### 3.2.1.1 Emissions from Construction Equipment

The emission calculations associated with construction equipment are from off-road equipment engine use based on the equipment list and phase length.

Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod™ assumes all of the equipment operates on diesel fuel. The CalEEMod™ model, which is based on SCAQMD construction survey, is used to estimate default equipment lists based on total project acreage as calculated from the acreage entered on the land use screen. If the acreage is in between the acreage in the survey, the next highest acreage tier is used. The calculations associated with this screen include the running exhaust emissions from off-road equipment. Since the equipment is assumed to be diesel, there are no starting or evaporative emissions associated with the equipment as these are de minimis for diesel-fueled equipment. CalEEMod™ calculates the exhaust emissions based on CARB's OFFROAD2011 methodology using the equation presented below.<sup>93</sup>

$$Emission_{SDiesel} = \sum_i (EF_i \times Pop_i \times AvgHP_i \times Load_i \times Activity_i)$$

Where:

EF = Emission factor in grams per horsepower-hour (g/bhp-hr) as processed from OFFROAD2011  
 Pop = Population, or the number of pieces of equipment  
 AvgHp = Maximum rated average horsepower  
 Load = Load factor  
 Activity = Hours of operation  
 i = equipment type

The GHG emissions associated with off-road construction equipment are shown in Table 6.

### 3.2.1.2 Greenhouse Gas Emissions from On-Road Trips

Construction generates on-road vehicle exhaust, evaporative, and dust emissions from personal vehicles for worker and vendor commuting, and trucks for soil and material hauling. These emissions are based on the number of trips and vehicle miles traveled (VMT) along with emission factors from EMFAC2011.

Running GHG emissions from tire and brake wear were divided by the VMT of each respective vehicle class from each scenario year and adjusted for unit conversions to derive emission factors in units of grams per VMT. All other emissions (including evaporative) were divided by the number of trips to derive emission factors in units of grams per trip.

<sup>93</sup> SCAQMD, 2013, California Emissions Estimator Model User's Guide, Appendix A, pages 5-6. Version 2013.2.2. July 2013. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

The emissions from mobile sources were calculated with the trip rates, trip lengths, and emission factors for running from EMFAC2011 as follows.<sup>94</sup>

$$\text{Emissions}_{\text{pollutant}} = \text{VMT} * \text{EF}_{\text{running, pollutant}}$$

Where:

$\text{Emissions}_{\text{pollutant}}$  = emissions from vehicle running for each pollutant

VMT = vehicle miles traveled

$\text{EF}_{\text{running, pollutant}}$  = emission factor for running emissions

Starting and idling emissions were also calculated in CalEEMod™ by multiplying the number of trips by the respective emission factor for each pollutant. The GHG emission from on-road vehicles associated with construction is shown in Table 7.

### 3.2.1.3 Total Construction Emissions

The total emissions from construction are summarized in Table 8. Total GHG emissions from all construction phases for off-road and on-road emissions are 798 and 2,777 MT CO<sub>2</sub>e, respectively. When amortized over 30-year project lifetime, the construction GHG emissions are 119 MT CO<sub>2</sub>e/year.<sup>95</sup> Detailed emission inventory from the CalEEMod™ output files are included in Appendix A.

### 3.2.2 Vegetation Changes

This section presents the calculation of the positive and negative GHG emissions associated with vegetation removal and re-vegetation at the Specific Plan site. Permanent vegetation changes that occur as a result of project development constitute a one-time change in the carbon sequestration capacity of a project. In this case, agriculture land use will be converted to different land uses with landscaped areas with trees and vegetation. The land use change will result in an overall net loss of carbon sequestration once the vegetation reaches a steady state (i.e., new vegetation replaces dying vegetation). Consequently, vegetation change results in increase in overall GHG emissions.

CalEEMod™ was used to calculate GHG emissions associated with the vegetation activities of land use change and the planting of new trees, as according to the Intergovernmental Panel on Climate Change (IPCC) protocol for vegetation. Overall Change in Sequestered CO<sub>2</sub>e can be estimated with this equation.<sup>96</sup>

$$\text{Overall Change in Sequestered CO}_2 = \sum_i ((\text{SeqCO}_2)_i \times \text{area}_i) - \sum_j ((\text{SeqCO}_2)_j \times \text{area}_j)$$

<sup>94</sup> SCAQMD, 2011, California Emissions Estimator Model User's Guide, Appendix A, pages 13-14. Version 2011.1. February. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

<sup>95</sup> This approach to one-time construction and vegetation change GHG emissions is based on the GHG Criteria Working Group Meeting #13 Minutes from August 26, 2009. Available at: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2). Accessed: March 2015.

<sup>96</sup> SCAQMD, 2011, California Emissions Estimator Model User's Guide, Appendix A, pages 40-43. Version 2011.1. February. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

Where:

$SeqCO_2$  = mass of sequestered  $CO_2$  per unit area [MT  $CO_2$ e/acre]  
area = area of land for specific land use type [acre]  
i = index for final land use type  
j = index for initial land use type

Overall change in sequestered  $CO_2$  is the summation of sequestered  $CO_2$  from initial land use type multiplied by area of land for initial land use type subtracted by the summation of sequestered  $CO_2$  from final land use type multiplied by area of land for final land use type. Table 9 summarizes vegetation changes.

### 3.2.2.1 Vegetation Change Emissions

The change in vegetation at the Specific Plan site results in a one-time net release of carbon as shown in Table 10. The Specific Plan site  $CO_2$ e emissions associated with vegetation change were estimated to be 536 MTCO<sub>2</sub>e. In other words, the Specific Plan is estimated to release a total of 536 MTCO<sub>2</sub>e or 18 MTCO<sub>2</sub>e per year if amortized over a 30-year project lifetime.

## 3.3 Annual Operational Emissions

Emissions from mobile and area sources and indirect emissions from energy and water use, wastewater, as well as waste management, would occur every year after build out. This section outlines the operational GHG emissions.

### 3.3.1 Area Sources

Area sources in CalEEMod™ consist of direct sources of air and GHG emissions. Area sources with GHG emissions relevant to the Specific Plan include emissions from landscape maintenance equipment. The area source GHG emissions included in this analysis result from landscaping-related fuel combustion sources, such as lawn mowers. The Specific Plan will not include any hearths. GHG emissions due to natural gas combustion in buildings other than hearths are excluded from this section since they are included in the emissions associated with building energy use.

The GHG emissions for the Specific Plan were calculated using CalEEMod™ defaults based upon the land uses that will be part of these developments. The resulting GHG emissions for the Specific Plan and the CARB 2020 NAT condition are shown in Tables 11 and 12.

### 3.3.2 Energy Use

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits  $CO_2$  and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Table 13 lists the emission factors for electricity used in this analysis and how it was calculated. Climate Zone 13 was selected based on the CEC forecast climate zone map shown in the CalEEMod™ User's Guide. The Specific Plan emissions have been calculated using a SDG&E emission factor that accounts for the 33% RPS required by 2020, as discussed in Section 3.1.3. The adjusted SDG&E emission factor is

based on the Power/Utility Reporting Protocol, which reports the mix renewable and non-renewable sources in SDG&E's energy supply. With this data, the SDG&E emission factor is adjusted to represent what the emissions from SDG&E would be in 2020. The Specific Plan's GHG emissions also reflect the Specific Plan's requirement to construct buildings that exceed the 2013 Title 24 Part 6 Building Code by 5%.<sup>97</sup> Additionally, the CARB 2020 NAT condition for the First Update to the Scoping Plan includes 20% RPS as required by 2010.

### 3.3.2.1 Emissions Estimation from Energy Use

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as plug-in appliances. In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting.<sup>98</sup> Non-building energy use or "plug-in" energy use can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). To calculate the building energy input for the Specific Plan (e.g., electricity, and natural gas), ENVIRON utilized default values provided in CalEEMod™, which are based on the CEUS.<sup>99</sup>

CalEEMod™ converts the resulting energy use quantities to GHG emissions by multiplying by the appropriate emission factors obtained by incorporating information on local electricity production. Unless otherwise noted, CalEEMod™ default parameters were used. The energy related emissions also include EPFs such as, installation of Energy Star appliances for the Specific Plan. The Energy Star commitment includes appliances such as, dish washers, refrigerators, and fans and the improved energy efficiency is based on CalEEMod™ default assumptions. These appliances reduce GHG emissions associated with reduced electricity usage.

The Specific Plan will also include the installation of PV panels over 60 percent of the parking garage roof. The estimated energy related GHG emissions reduced from this commitment is estimated in Table 14.

For the Specific Plan, CO<sub>2</sub>e emissions from electricity and natural gas usages were estimated to be 3,078 and 135 MTCO<sub>2</sub>e/year, respectively, or 3,213 MTCO<sub>2</sub>e/year total based on the 2011 FED GWPs, as shown in Table 15. The 2011 FED CARB 2020 NAT condition is estimated to emit 4,605 and 162 MTCO<sub>2</sub>e/year from electricity and natural gas usage, respectively, or 4,767 MTCO<sub>2</sub>e/year total (Table 16).

For the Specific Plan, CO<sub>2</sub>e emissions from electricity and natural gas usages were estimated to be 3,078 and 135 MTCO<sub>2</sub>e/year, respectively, or 3,213 MTCO<sub>2</sub>e/year total based on the 2014 Scoping Plan GWPs, as shown in Table 15. The 2014 Scoping Plan CARB 2020 NAT condition

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<sup>97</sup> The Title 24 2013 Building Energy Efficiency Standards are pending. Available at: [http://www.energy.ca.gov/title24/2013standards/rulemaking/documents/2013\\_Building\\_Energy\\_Efficiency\\_Standards\\_FAQ.pdf](http://www.energy.ca.gov/title24/2013standards/rulemaking/documents/2013_Building_Energy_Efficiency_Standards_FAQ.pdf). Accessed: March 2015.

<sup>98</sup> Title 24, Part 6, of the California Code of Regulations: California's Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: <http://www.energy.ca.gov/title24/>. Accessed: March 2015.

<sup>99</sup> A detailed explanation how the RASS and CEUS data was processed for use in CalEEMod™ is available in CalEEMod™ User's Guide Appendix E pages 27-32.



is estimated to emit 4,056 and 162 MTCO<sub>2</sub>e/year from electricity and natural gas usage, respectively, or 4,218 MTCO<sub>2</sub>e/year total (Table 16).

### 3.3.3 Water Supply, Treatment and Distribution

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. Additional emissions from wastewater treatment include CH<sub>4</sub> and N<sub>2</sub>O, which are emitted directly from the wastewater.

Base on the Water System Analysis, the Specific Plan water usage is estimated to be 51 million gallons per year (MMgal/yr) before any water efficiency measures are incorporated.<sup>100</sup> The Water Systems Analysis also reflects an estimated water reduction from implementing the EPFs; such as installing dual flush toilets, waterless urinals, and self-closing faucets, and using recycled water for outdoor irrigation; are quantified in this analysis. The 2011 FED and 2014 Scoping Plan CARB 2020 NAT conditions assume that these EPFs to reduce potable water usage are not incorporated. While the Specific Plan is anticipated to reduce potable water usage relative to existing conditions, this analysis conservatively does not incorporate this benefit. GHG emissions related to the water and wastewater conveyance were based on the utility emission factors consistent with the Specific Plan analysis.

The Specific Plan was estimated to have 33.0 and 15.6 MMgal/yr of indoor and outdoor water usages and was estimated to result in 187 MTCO<sub>2</sub>e/yr as shown in Table 17 based on the 2011 FED GWPs. The 2011 FED CARB 2020 NAT condition was estimated to have 34.5 and 16.6 MMgal/yr of indoor and outdoor water usages and was estimated to result in 251 MTCO<sub>2</sub>e/yr as shown in Table 18.

The Specific Plan was estimated to have 33.0 and 15.6 MMgal/yr of indoor and outdoor water usages and was estimated to result in 191 MTCO<sub>2</sub>e/yr as shown in Table 17 based on the 2011 FED GWPs. The 2014 Scoping Plan CARB 2020 NAT condition was estimated to have 34.5 and 16.6 MMgal/yr of indoor and outdoor water usages and was estimated to result in 230 MTCO<sub>2</sub>e/yr as shown in Table 18.

### 3.3.4 Solid Waste

Municipal solid waste (MSW) is the amount of material that is disposed of by land filling, recycling, or composting. CalEEMod™ calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. The emission estimates in this Specific Plan were based on CalEEMod™ default factors. CalEEMod™ uses the overall California Waste Stream composition to generate the necessary types of different waste disposed into landfills. The program quantifies the GHG emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon. The program quantifies the CO<sub>2</sub> emissions

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<sup>100</sup> Dexter Wilson Engineering, Inc. Water System Analysis for the Agua Hedionda Open Space, Strawberry Farming, and Agricultural Preservation and Improvement Specific Plan. March 16, 2015.

associated with the combustion of methane, if applicable. Default landfill gas concentrations were used as reported in Section 2.4 of AP-42. The IPCC has a similar method to calculate GHG emissions from MSW in its 2006 Guidelines for National Greenhouse Gas Inventories.

The analysis assumes that the Specific Plan will be consistent with the statewide goal of 75% waste diversion<sup>101</sup>. The CalEEMod™ solid waste module estimates the GHG emissions associated with the disposal of solid waste into landfills, in quantities that are based upon land use type according to waste disposal studies conducted by CalRecycle. For this analysis, CalEEMod™ default waste disposal rates were assumed to reflect the City of Carlsbad's current waste diversion rate of 57%,<sup>102</sup> which is assumed to represent the CARB 2020 NAT condition. GHG emissions associated with non-landfill diverted waste streams are not considered, because it is generally assumed that these diversions do not result in any appreciable amounts of GHG emissions when operated effectively.<sup>103</sup> These waste diversion alternatives may result in differences in life-cycle emissions of GHGs, but it is not appropriate to combine life-cycle emissions for only one category of emissions.<sup>104</sup> As mentioned previously, biogenic CO<sub>2</sub> emissions were not included when CARB analyzed the GHG emissions inventory under AB 32. Therefore, they are not included in the Specific Plan emissions inventory.

The Specific Plan was estimated to generate 638 tons/yr of solid waste and was estimated to result in 290 MTCO<sub>2</sub>e/yr as shown in Table 19 based on the 2011 FED GWPs. The 2011 FED CARB 2020 NAT condition was estimated to generate 1,097 tons/yr of solid waste and was estimated to result in 499 MTCO<sub>2</sub>e/yr as shown in Table 20.

The Specific Plan was estimated to generate 638 tons/yr of solid waste and was estimated to result in 321 MTCO<sub>2</sub>e/yr as shown in Table 19 based on the 2014 Scoping Plan GWPs. The 2014 Scoping Plan CARB 2020 NAT condition was estimated to generate 1,097 tons/yr of solid waste and was estimated to result in 552 MTCO<sub>2</sub>e/yr as shown in Table 20.

### 3.3.5 Mobile Source Emissions

The GHG emissions associated with on-road mobile sources are generated from residents, workers, customers, and delivery vehicles visiting the land use types in the project. The emissions associated with on-road mobile sources includes running and starting exhaust emissions and evaporative emissions. Starting and evaporative emissions are associated with the number of starts or time between vehicle uses and the assumptions used in determining

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<sup>101</sup> CalRecycle, 2013. California's 75 Percent Initiative. Available at: <http://www.calrecycle.ca.gov/75percent/>. Accessed: March 2015.

<sup>102</sup> County of San Diego's Countywide Integrated Waste Management Plan. [http://www.sandiegocounty.gov/dpw/recycling/Files/CIWMP\\_SanDiegoCounty\\_Final.pdf](http://www.sandiegocounty.gov/dpw/recycling/Files/CIWMP_SanDiegoCounty_Final.pdf). Accessed: March 2015.

<sup>103</sup> CARB. 2010. Local Government Operations Protocol. Chapter 9.4.

<sup>104</sup> This inventory represents scope 1 and 2 emission categories. A life-cycle analysis of waste diversion would be a scope 3 inventory. CARB's Local Government Operations Protocol Version 1.1 (May 2010) clearly states that scope 3 emissions should not be combined with scope 1 and 2 emissions. [http://www.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](http://www.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf) Accessed: March 2015.

these values are described below. All of the other emissions are dependent on VMT. ENVIRON estimated traffic emissions using the trip rates specified in the Traffic Study<sup>105</sup> (Table 21).

The analysis includes the benefit of reductions from some adopted regulatory programs such as Pavley, LCFS, and Advanced Clean Cars, which are accounted for as follows.

- AB 1493 (“the Pavley Standard”) requires CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 and thereafter. The CalEEMod™ model includes emission reductions for non-commercial passenger vehicles and light-duty trucks of model year 2017 – 2025.
- The LCFS went into effect on April 15, 2010, and requires a reduction in the carbon intensity of transportation fuels used in California by at least 10 percent by 2020. Reductions due to LCFS were further applied to CO<sub>2</sub> emission factors after adjustments from Pavley I for scenario years 2011 and after. This is also included in the CalEEMod™ model.
- The Advanced Clean Cars program, introduced in 2012, combines the control of smog, soot causing pollutants and greenhouse gas emissions into a single coordinated package of requirements for model years 2015 through 2025. This regulation has not been incorporated into CalEEMod™, and thus an estimate of the GHG emission factor reductions from the Advanced Clean Cars program were separately incorporated into the analysis. The emission factors were adjusted for the Advanced Clean Cars regulation based on the CARB’s LEV III database model (LEV3 Tool), which was used to estimate the statewide Advanced Clean Cars emissions reduction factors for 2020. The Advanced Clean Cars emission reduction factors were incorporated into the analysis by multiplying the CalEEMod™ emission factors by the Advanced Clean Cars emission reduction factors for the Specific Plan emissions inventory.

There are other regulations that may also further reduce mobile source related emissions such as the USEPA/NHTSA advanced fuel economy and GHG standards for medium and heavy duty trucks for model years 2014-2018. The analysis does not incorporate the potential emission reductions from the USEPA/NHTSA advanced fuel economy and GHG standards for medium and heavy duty trucks. Excluding these reductions results in a more conservative (i.e., higher) Specific Plan emissions inventory given the likely decreases in GHG emissions associated with the USEPA/NHTSA standards.

Consistent with the AB 32 Scoping Plan, the 2011 FED CARB 2020 NAT condition assumes that the Pavley, LCFS regulations, and Advanced Clean Car Program are not in place. However, the 2014 Scoping Plan CARB NAT condition assumes that Pavley is in place.

### 3.3.5.1 Trip Type

In CalEEMod™, the trip type breakdown describes the purpose of the trip generated at each land use. For example, the trip type breakdown indicates the percentage of trips generated at single family home for work, for shopping, and for other purposes. Two sets of trip type

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<sup>105</sup>Fehr and Peers. “Transportation Impact Analysis for Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail.” May, 2015.

breakdowns are used in CalEEMod™, however, since the analysis relies upon trip generation and vehicle miles traveled estimates provided by the Traffic Consultant, the percentage breakdown of trip types shown in the CalEEMod™ analyses are not relevant to this analysis.<sup>106</sup>

- **Commercial Trips** – These trips include commercial-customer (C-C), commercial-work (C-W) and commercial-nonwork (C-NW). A commercial-customer trip represents a trip made by someone who is visiting the commercial land use to partake in the services offered by the site. The commercial-work trip represents a trip made by someone who is employed by the commercial land use. The commercial-nonwork trip represents a trip associated with the commercial land use other than by customers or workers. An example of C-NW trips includes trips made by delivery vehicles of goods associated with the land use. The trip type breakdown from the number of workers and or truck trips from Institute of Transportation Engineers and an analysis of information provided for the South Coast Air Basin was used as default to assign the trip type breakdowns for all land uses in CalEEMod™.

### 3.3.5.2 Primary Trip Length

The Traffic Consultant provided an estimated average trip length for all trips for the Specific Plan. The average trip length of 9.7 miles was applied to all trip types in the analysis. While CalEEMod™ provides default options for a 'rural' and 'urban' setting for the various geographic areas in California, and this analysis used an 'urban' setting based on the location in Carlsbad, California, the analysis is based on the Traffic Consultant estimated trip rates and average trip length.

### 3.3.5.3 Trip Reductions

The Specific Plan will reduce the estimated trip generation based on its implementation of the traffic-related design elements and EPFs, collectively referred to as TDM measures. The TDM measures are estimated to reduce the trips generation by 6% for the retail, theatre, and supermarket land uses.<sup>107</sup>

The 2011 FED and 2014 Scoping Plan CARB 2020 NAT conditions assume that the TDM measures described above are not included since these are design features which have been specifically incorporated to help reduce trip generation.

### 3.3.5.4 Pass-by and Diverted Trips

Trip link types further describe the characteristics of the trip attracted to each land use, whether it is a primary trip, a diverted link trip, or a pass-by trip. For example, a commercial customer pass-by trip could be a person going from home to shop on his/her way to work. In addition, a commercial customer diverted-link trip could be a person going from home to work, and on its way making a diversion to shop. Pass-by trips generate virtually no additional running emissions but could generate additional resting and startup emissions. Diverted trips generate less running

<sup>106</sup> SCAQMD, 2013, California Emissions Estimator Model User's Guide, Appendix A, page 20. Version 2011.1. February. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

<sup>107</sup> Fehr and Peers. "Transportation Impact Analysis for Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail." May, 2015.

emissions compared to primary trips, and can also generate additional resting and startup emissions.

The Specific Plan Traffic Study incorporated a reduction related to pass-by trips and diverted trips. The trip rates, based on the Traffic Study analysis, are shown in Table 22.

### **3.3.5.5 Electric Vehicle Charging Stations**

The Specific Plan will include the installation of six EV charging stations. The estimated energy related GHG emissions reduced from this commitment is estimated in Table 23.

### **3.3.5.6 Estimated Emissions from Mobile Sources**

The Specific Plan was estimated to generate approximately 81,659,251 VMT/year and was estimated to result in 30,160 MTCO<sub>2</sub>e/year as shown in Table 24 based on the 2011 FED GWPs. The associated 2011 FED CARB 2020 NAT condition is estimated to generate approximately 86,645,612 VMT/year and was estimated to result in 41,931 MTCO<sub>2</sub>e/year as shown in Table 25.

The Specific Plan was estimated to generate approximately 81,659,251 VMT/year and was estimated to result in 30,165 MTCO<sub>2</sub>e/year as shown in Table 24 based on the 2014 Scoping Plan GWPs. The associated 2014 Scoping Plan CARB 2020 NAT condition is estimated to generate approximately 86,645,612 VMT/year and was estimated to result in 35,447 MTCO<sub>2</sub>e/year as shown in Table 25.

## 4 Inventory in Context

This section examines the overall Specific Plan emissions.

### 4.1 Existing Conditions Analysis

This report considers the extent to which the Specific Plan may increase or reduce GHG emissions as compared to the existing environmental setting. As previously documented, the Specific Plan site – in its existing condition – emits approximately 227 MT of CO<sub>2</sub>e per year, and the Specific Plan emits approximately 33,076 MTCO<sub>2</sub>e per year (Tables ES-1 and ES-2). Since the existing condition emissions are expected to continue to occur, the Specific Plan results in a change to the existing environment, by increasing existing GHG emission levels by approximately 33,076 MT of CO<sub>2</sub>e per year (i.e., the existing condition emissions are not subtracted out). While the Specific Plan results in a change to the existing environment, there is no scientific or regulatory consensus regarding what particular quantity of GHG emissions is significant. Further, no agency with regulatory authority and expertise, such as the CARB or San Diego County Air Pollution Control District has adopted numeric GHG criteria for land use development projects. Therefore, this numeric delta is not a meaningful, informative, or reliable indicator of the significance of the Specific Plan's GHG emissions.

### 4.2 AB 32 Analysis – 2011 FED's Business-As-Usual Projections

This report considers (i) whether the Specific Plan's emissions exceed a criterion of significance and (ii) the extent to which the Specific Plan complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. In assessing the Specific Plan's significance under these two criteria, reference is made to the California Global Warming Solutions Act of 2006, also known as AB 32. AB 32 requires the State to achieve 1990 levels of GHG emissions by 2020, which numerically equates to a 21.7 percent reduction in GHG emissions as evaluated in the 2011 FED.

In order to assess the Specific Plan's significance under AB 32, the report compares the Specific Plan's emissions to the Specific Plan's emissions if the Specific Plan were built using a BAU or NAT approach in terms of design, methodology, and technology. (A summary of the 2011 FED CARB 2020 NAT and Specific Plan condition assumptions are included in Table 26.) This methodology is based on the CARB's 2008 Scoping Plan and its 2011 FED, which was adopted pursuant to AB 32 and found that statewide GHG emission levels need to be reduced by 21.7 percent in order for the State to achieve the mandate of AB 32.

The emissions for the Specific Plan and the 2011 FED CARB 2020 NAT condition are estimated to be approximately 33,076 and 47,585 MTCO<sub>2</sub>e per year, respectively, which results in a Specific Plan emission reduction of 30.5 percent from the 2011 FED CARB 2020 NAT condition (see Table ES-2). As such, the Specific Plan will not result in significant impacts under this methodology.

### 4.3 AB 32 Analysis – 2014 First Update to the Scoping Plan's Business-As-Usual Projections

The Specific Plan's significance in reference to AB 32 is also evaluated relative to CARB's 2014 First Update to the Scoping Plan. Based on the First Update, the State can achieve the

emissions reduction mandate of AB 32 by achieving a 15.8 percent reduction in GHG emissions.

Similar to the prior methodology, in order to assess the Specific Plan's significance under AB 32, the report compares the Specific Plan's emissions to the Specific Plan's emissions if the Specific Plan were built using the BAU or NAT approach in terms of design, methodology, and technology and reductions outlined in the First Update. A summary of the 2014 Scoping Plan CARB 2020 NAT and Specific Plan condition assumptions are included in Table 26. This analysis also accounts for the updated GWPs relied upon in the First Updated Scoping Plan.

The emissions for the Specific Plan and the 2014 Scoping Plan CARB 2020 NAT condition are estimated to be approximately 33,116 and 40,585 MTCO<sub>2</sub>e per year, respectively, which results in a Specific Plan emission reduction of 18.4 percent from the 2014 Scoping Plan CARB 2020 NAT condition (see Table ES-4). As such, the Specific Plan will not result in significant impacts under this methodology.

#### **4.4 SB 375 Analysis**

This report considers the extent to which the Specific Plan complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. In assessing the Specific Plan's significance under this criterion, reference is made to the Sustainable Communities and Climate Protection Act of 2008, also known as SB 375. SB 375 requires the State's metropolitan planning organizations to adopt a "sustainable community's strategy," or an SCS, that coordinates transportation and land use planning in order to reduce GHG emissions from light duty, passenger vehicles.

In order to assess the Specific Plan's significance under SB 375, the consistency of the Specific Plan's land use assumptions with the SANDAG's 2012 RTP/SCS was evaluated. Based on the evaluation, the Specific Plan's proposed land use development is consistent with the City of Carlsbad's General Plan land use designation used by SANDAG to develop its SB 375 forecasted development pattern in the SCS. Similarly, the Specific Plan area was identified for regional commercial development in the SANDAG model. Because the SANDAG model anticipated development of the kind and quantity proposed by the Specific Plan, and the model demonstrated achievement of the SB 375 reduction targets to the satisfaction of CARB, the Specific Plan is consistent with the objectives of SB 375 and SANDAG's SCS.

#### **4.5 City of Carlsbad Draft Climate Action Plan Analysis**

The City of Carlsbad's Draft CAP suggests that its "Preliminary CAP Project Review Checklist" should be completed for any project that emits more than 2,500 MT CO<sub>2</sub>e per year. Since the Specific Plan will exceed that screening criteria, a review of the CAP Project Review Checklist is completed below.

##### **Renewable Energy Production – Included**

The Specific Plan will incorporated photovoltaic panels over 60 percent of the parking garage roof.

##### **Cogeneration – Not Applicable**



There is no onsite electricity production.

### **Energy Conservation Ordinances – Not Applicable**

The City has not yet developed a commercial energy conservation ordinance.

### **Green Building Code – Included**

The Specific Plan, at a minimum, will exceed the 2013 Title 24 standards by 5%. In the event that an update to those standards becomes effective before building permits are secured, the Specific Plan will comply with the then-effective and applicable building standards. The Specific Plan will include various features to improve building energy efficiency such as:

- Implementing LEED Gold Core and Shell Design Standard;
- Installing high efficiency lighting;
- Installing electronic parking availability signage; and
- Incorporating an Energy Management System.

### **Solar Water Heaters/Heat Pumps – Not included**

The Specific Plan has minimal hot water usage and will not incorporate solar water heaters.

### **Transportation Demand Management – Included**

The Specific Plan includes a 6% trip reduction from the retail, theatre, and supermarket land uses based on the TDM plan.

### **Zero Emission Vehicles – Included**

The Specific Plan will include preferential parking for electric vehicles and charging stations for electric vehicle use.

### **Other GHG Reduction Measures and/or Features – Included**

The Specific Plan also includes other GHG reduction measures or features, such as:

- Using Energy Star Appliances; and
- Implementing water conservation measures, such as using recycled water or outdoor irrigation and installing dual flush toilets, waterless urinals, and self-closing faucets.

The Specific Plan implements emission reduction strategies in the applicable categories contemplated by the CAP.

## **4.6 Post-2020 Reduction Targets**

This Technical Report also evaluates the Specific Plan's consistency with Executive Order B-30-15's goal of reducing the State's GHG emissions to 40 percent below the 1990 level by the year 2030, and Executive Order S-3-05's goal of reducing the State's GHG emissions to 80 percent below the 1990 level by the year 2050.

As of 2004, California was emitting 12 percent more GHG emissions than in 1990.<sup>108</sup> For California to emit 80 percent less than it emitted in 1990, the emissions would be only 18 percent of the 2004 emissions. Accounting for a population growth from 35,840,000 people in 2004 to approximately 55,000,000 people in 2050, the emissions per capita would have to be only 12 percent of what they were in 2004. This means 88 percent reductions in per capita GHG emissions from today's emissions intensities must be realized in order to achieve California's 2050 GHG goals. Clearly, energy efficiency and reduced vehicle miles traveled will play important roles in achieving this aggressive goal, but the decarbonization of fuel will also be necessary.

The extent to which GHG emissions from traffic at the Specific Plan will change in the future depends on the quantity (e.g. number of vehicles, average daily mileage) and quality (i.e. carbon content) of fuel that will be available and required to meet both regulatory standards and residents' needs. In addition, renewable power requirements, low carbon fuel standards, and vehicle emissions standards discussed above will all decrease GHG emissions per unit of energy delivered or per vehicle mile traveled. Due to the technological shifts required and the unknown parameters of the regulatory framework in 2030 and 2050, quantitatively analyzing the Specific Plan's impacts further relative to the 2030 and 2050 targets is speculative.

That being said, studies<sup>109</sup> have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, such as electrification and maturation of technologies still in development (e.g., advanced batteries and more efficient biofuels), will be required. One recent study<sup>110</sup> indicated that, even with these emerging technologies, the 2050 goal will not be met, due to the population growth to 55 million by 2050. A more recent study,<sup>111</sup> however, shows that the existing and proposed regulatory framework will allow the State to reduce GHG emission to 40 percent below 1990 levels by 2030, and to 60 percent below 1990 by 2050. Even though this study did not provide a regulatory and technology roadmap to achieve the 2050 target, it demonstrated that various combinations of policies could allow Statewide emissions to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the State to meet the 2050 target.

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<sup>108</sup> California Energy Commission. 2006. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. October. Available at: <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-D.PDF>. Accessed: March 2015.

<sup>109</sup> Lawrence Berkeley National Laboratory (LBL). 2011. California's Energy Future – The View to 2050. May. Available at: <http://ccst.us/publications/2011/2011energy.php>. Accessed: March 2015.

<sup>110</sup> LBL. 2013. Estimating Policy-Driven Greenhouse Gas Emissions Trajectories in California: The California Greenhouse Gas Inventory Spreadsheet (GHGIS) Model. Available at: <http://eetd.lbl.gov/publications/estimating-policy-driven-greenhouse-g>. Accessed: March 2015.

<sup>111</sup> Jeffery Greenblatt. 2015. Modeling California Impacts on Greenhouse Gas Emissions. Energy Policy. Volume 78, March 2015, pages 158-172. Abstract available at: <http://www.sciencedirect.com/science/article/pii/S0301421514006892>. Accessed: January 2015. Another recent report concluded that California could achieve a 38% reduction in statewide GHG emissions from the 1990 level by 2030 if the identified reduction strategies were subject to early deployment. See Energy + Environmental Economics. 2015. Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios. Available at [https://ethree.com/documents/E3\\_Project\\_Overview\\_20150406.pdf](https://ethree.com/documents/E3_Project_Overview_20150406.pdf). Accessed: April 2015.

Indeed, statewide efforts are underway to facilitate the State's achievement of its 2030 and 2050 goals. Many of these initiatives include reducing the carbon content of motor fuels and fuels for electricity generation.<sup>112</sup>

CARB's First Update specifically "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050." Many of the emission reduction strategies recommended by CARB would serve to reduce the Specific Plan's post-2020 emissions level to the extent applicable by law:

- Energy Sector: Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the Specific Plan's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the Specific Plan's emissions level.
- Transportation Sector: Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the Specific Plan's emissions level.
- Water Sector: The Specific Plan's emissions level will be reduced as a result of further desired enhancements to water conservation technologies.
- Waste Management Sector: Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the Specific Plan's emissions level.

In addition to CARB's First Update, in January 2015, during his inaugural address, Governor Jerry Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions: (1) increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030; (2) cutting the petroleum use in cars and trucks in half; and, (3) doubling the efficiency of existing buildings and making heating fuels cleaner. These expressions of Executive Branch policy may be manifested in adopted legislative or regulatory action through the state agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change.

Given the proportional contribution of mobile source-related GHG emissions to the State's inventory, recent studies<sup>113</sup> also show that relatively new trends, such as the increasing importance of web-based shopping, the emergence of different driving patterns by the "millennial" generation and the increasing effect of Web-based applications on transportation choices, are beginning to substantially influence transportation choices and the energy used by transportation modes. These factors have changed the direction of transportation trends in recent years, and will require the creation of new models to effectively analyze future transportation patterns and the corresponding effect on GHG emissions.

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<sup>112</sup>California Energy Commission. 2007. State Alternative Fuels Plan. December. CEC-600-2007-011-CMF. Available at: <http://www.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CMF.PDF>. Accessed: January 2015.

Additionally, as described in Section 4, the Specific Plan has been found to be consistent with the 2035 reduction target established by CARB, pursuant to SB 375, for the SANDAG region for purposes of securing GHG emission reductions resulting from vehicle miles traveled by passenger vehicles. As shown in Table ES-3 and ES-4, Specific Plan's traffic-related GHG emissions constitute a substantial percentage of the Specific Plan's total emissions inventory, such that the Specific Plan's consistency with CARB's 2035 SB 375 target for the SANDAG region affirms the Specific Plan's compatibility with any mid-term GHG reduction goals specific to mobile sources established by CARB or the Legislature.

In summary, it is reasonable to expect the Specific Plan's emissions level (approximately 30,568 metric tons of CO<sub>2</sub>e per year in 2020) to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Specific Plan's emissions total at build-out represents the maximum emissions inventory for the Specific Plan as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. Given the reasonably anticipated decline in Specific Plan emissions attributable to regulatory and technological advancements, the Specific Plan is in line with and does not conflict with the emission reductions needed to achieve the Executive Orders' post-2020 goals.

## Tables

**Table 1. Specific Plan Land Uses and Square Footages**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Specific Plan <sup>1</sup>		CalEEMod Analysis				
		Land Use Category	Land Use Subtype <sup>2</sup>	Unit Amount	Size Metric	Lot Acreage <sup>4</sup>
Retail	488 TSF	Retail	Regional Shopping Center	488	TSF	24.4
Theater	2500 seats	Recreation	Movie Theater (No Matinee)	2,500	seat	2.8
Market/Grocery	46 TSF	Retail	Supermarket	46	TSF	2.3
Surface Parking Spaces	500 spaces	Parking	Parking Lot	500	space	0.7
Structured Parking Spaces	4,202 spaces	Parking	Unenclosed Parking Structure	4,202	space	5.6
Open Space/Agricultural Fields	176.7 acres	User Defined	User Defined Recreational <sup>3</sup>	175.6	acre	175.6

**Notes:**

<sup>1</sup> Specific Plan conditions defined based on Proposed Specific Plan description and traffic study land use type.

<sup>2</sup> Land uses as defined in CalEEMod<sup>TM</sup>. When an exact mapping of a land use was not available in CalEEMod<sup>TM</sup> relative to the "Specific Plan Entitlement," a land use with similar emission characteristics was chosen. For example, retail was represented as a 'regional shopping center,' and passive parks/AG uses was represented as 'user defined recreational.'

<sup>3</sup> The acreage for the open space and agricultural fields land use in the CalEEMod analysis is slightly smaller than the Specific Plan Entitlement. If the CalEEMod analysis was updated to the Specific Plan Entitlement, the related emission estimates are not expected to change.

<sup>4</sup> The total lot acreage for the Retail, Theater, Market/Grocery, and Parking Spaces used in CalEEMod modeling was conservatively estimated as 35.9 acres to represent the area potentially impacted by construction activity. This area includes building and parking structure footprints, water features, hardscape and landscaping area.

**Abbreviations:**

CalEEMod - CALifornia Emissions Estimator MODel

TSF - thousand square feet

GHG - greenhouse gas

**Table 2. Construction Schedule Assumptions**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

<b>Construction Phase Name<sup>1,2</sup></b>	<b>Phase Type</b>	<b>Phase Start Date<sup>5,6</sup></b>	<b>Phase End Date<sup>5,6</sup></b>
Demolition	Demolition	2017/07/01	2017/07/21
Site Preparation <sup>3</sup>	Site Preparation	2017/07/22	2017/09/15
Grading <sup>3</sup>	Grading	2017/09/16	2017/12/08
Building Construction	Building Construction	2017/12/09	2019/04/26
Paving <sup>4</sup>	Paving	2019/04/27	2019/08/30
Architectural Coating	Architectural Coating	2019/08/31	2019/11/08

Notes:<sup>1</sup> Specific Plan construction schedule.<sup>2</sup> Construction assumptions based on CalEEMod™ version 2013.2.2 defaults and Specific Plan estimates.<sup>3</sup> Site preparation and grading includes excavation activity and below grade parking foundation.<sup>4</sup> Paving includes leveling of land/pavements around the constructed buildings.<sup>5</sup> Construction activity assumed to occur 5 days/week.<sup>6</sup> Analysis assumes that watering occurs twice/day for fugitive dust control.Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel



**Table 3. Construction Equipment Mix Assumptions**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Construction Phase Name <sup>1,2</sup>	OffRoad Equipment Type	Equipment Unit Amount	Usage Hours <sup>5,6</sup>	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Excavators	3	8	162	0.38
	Rubber Tired Dozers	2	8	255	0.40
Site Preparation <sup>3</sup>	Rubber Tired Dozers	3	8	255	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading <sup>3</sup>	Excavators	2	8	162	0.38
	Graders	1	8	174	0.41
	Rubber Tired Dozers	1	8	255	0.40
	Scrapers	2	8	361	0.48
	Tractors/Loaders/Backhoes	2	8	97	0.37
Building Construction	Cranes	1	7	226	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Paving <sup>4</sup>	Pavers	2	8	125	0.42
	Paving Equipment	2	8	130	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48

**Notes:**<sup>1</sup> Specific Plan construction schedule.<sup>2</sup> Construction assumptions based on CalEEMod™ version 2013.2.2 defaults and Specific Plan estimates.<sup>3</sup> Site preparation and grading includes excavation activity and below grade parking foundation.<sup>4</sup> Paving includes leveling of land/pavements around the constructed buildings.<sup>5</sup> Construction activity assumed to occur 5 days/week.<sup>6</sup> Analysis assumes that watering occurs twice/day for fugitive dust control.**Abbreviations:**

CalEEMod - CALifornia Emissions Estimator MODel

**Table 4. Construction Worker, Vendor and Hauling Trips Summary**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Construction Phase Name <sup>1,2</sup>	OffRoad Equipment Type	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Demolition	Concrete/Industrial Saws	15	0	0
	Excavators			
	Rubber Tired Dozers			
Site Preparation <sup>3</sup>	Rubber Tired Dozers	18	0	0
	Tractors/Loaders/Backhoes			
Grading <sup>3</sup>	Excavators	20	0	0
	Graders			
	Rubber Tired Dozers			
	Scrapers			
	Tractors/Loaders/Backhoes			
Building Construction	Cranes	984	405	0
	Forklifts			
	Generator Sets			
	Tractors/Loaders/Backhoes			
	Welders			
Paving <sup>4</sup>	Pavers	15	0	0
	Paving Equipment			
	Rollers			
Architectural Coating	Air Compressors	197	0	0

Notes:<sup>1</sup> Specific Plan construction schedule.<sup>2</sup> Construction assumptions based on CalEEMod™ version 2013.2.2 defaults and Specific Plan estimates.<sup>3</sup> Site preparation and grading includes excavation activity and below grade parking foundation.<sup>4</sup> Paving includes leveling of land/pavements around the constructed buildings.Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

**Table 5. Grading Volumes**

Agua Hedionda 85/15 Specific Plan  
Carlsbad, California

Project Construction Phase <sup>1</sup>	Material Imported	Material Exported	Total Altered Area
	Cubic Yards		Acres
Grading	0	0	35.9

Notes:

<sup>1</sup> Based on Specific Plan description.

**Table 6. Annual GHG Construction Emissions from Off-Road Equipment<sup>1</sup>**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Construction Phase	CO <sub>2</sub> e Emissions (MT) <sup>2</sup>
Demolition	28
Site Preparation	73
Grading	173
Building Construction	427
Paving	91
Architectural Coating	6
<b>Total</b>	<b>798</b>

Notes:<sup>1</sup> Emissions were estimated using CalEEMod™ version 2013.2.2.<sup>2</sup> CO<sub>2</sub>e includes CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions, weighted by their respective global warming potentials.Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODEL

CH<sub>4</sub> - methaneCO<sub>2</sub>e - carbon dioxide equivalentsCO<sub>2</sub> - carbon dioxide

GHG - greenhouse gases

MT - metric tons

N<sub>2</sub>O - nitrous oxide

**Table 7. Annual GHG Construction Emissions from On-Road Vehicles<sup>1</sup>**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Construction Phase	CO <sub>2</sub> e Emissions (MT) <sup>1,2</sup>			
	Hauling	Vendor	Worker	Total
Demolition	0	0	1	1
Site Preparation	0	0	3	3
Grading	0	0	4	4
Building Construction	0	1,515	1,218	2,732
Paving	0	0	5	5
Architectural Coating	0	0	32	32
Total				2,777

Notes:<sup>1</sup> Emissions were estimated using CalEEMod™ version 2013.2.2.<sup>2</sup> CO<sub>2</sub>e includes CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions, weighted by their respective global warming potentials.Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODel

CH<sub>4</sub> - methaneCO<sub>2</sub>e - carbon dioxide equivalentsCO<sub>2</sub> - carbon dioxide

GHG - greenhouse gases

MT - metric tons

N<sub>2</sub>O - nitrous oxide

**Table 8. Construction Emissions Summary<sup>1</sup>**

Agua Hedionda 85/15 Specific Plan  
 Carlsbad, California

Calendar Year	Total Off-Road Emissions	Total On-Road Emissions			Total Construction Emissions
		Worker	Vendor	Hauling	
	(MT CO <sub>2</sub> e)				
2017	292	61	64	0	417
2018	311	889	1,102	0	2,301
2019	196	312	349	0	857
Total	798	1,262	1,515	0	3,575
30-yr Amortized					119

Notes:

<sup>1</sup> Construction emissions include On-site and Off-site (worker/vendor/hauling) emissions, estimated using CalEEMod™ version 2013.2.2 or methodologies described in the text. CO<sub>2</sub>e includes CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions, weighted by their respective global warming potentials.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

CH<sub>4</sub> - methane

CO<sub>2</sub> - carbon dioxide

CO<sub>2</sub>e - carbon dioxide equivalents

GHG - greenhouse gases

MT - metric tons

N<sub>2</sub>O - nitrogen dioxide

yr - year

**Table 9. Specific Plan Vegetation**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Land Use Change			
Land Use Type	Land Use Subtype	Initial Acreage	Final Acreage
Forest Land <sup>1</sup>	Scrub	157.60	120.10
Sequestration			
Total net trees		0	

Notes:<sup>1</sup> Based on the Specific Plan Land Use Plan.



**Table 10. Vegetation Change Evaluation**

Agua Hedionda 85/15 Specific Plan

Carlsbad, CA

Type of Vegetation Change	Land Use Change <sup>1</sup>		Annual CO <sub>2</sub> Accumulation <sup>2</sup> (MT)
	Initial (acres)	Final (acres)	
Scrub	158	120	536
<b>Total vegetation change</b>	<b>158</b>	<b>120</b>	<b>536</b>
<b>Total CO<sub>2</sub>e emissions released</b>			<b>536</b>
<b>30-yr amortized</b>			<b>18</b>

Notes:<sup>1</sup> Based on vegetation change data for the Specific Plan.<sup>2</sup> Emissions were estimated using CalEEMod version 2013.2.2.Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

MT - metric tons

CO<sub>2</sub> - carbon dioxide

yr - year

CO<sub>2</sub>e - carbon dioxide equivalents

**Table 11. GHG Emissions from Area Sources for the Proposed Specific Plan**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Category <sup>1</sup>	2011 FED	2014 Scoping Plan
	CO <sub>2</sub> e Emissions <sup>2,3</sup>	CO <sub>2</sub> e Emissions <sup>2,3</sup>
	(MT/yr)	(MT/yr)
Landscaping	0.15	0.15
<b>Total</b>	<b>0.15</b>	<b>0.15</b>

**Notes:**

<sup>1</sup> Categories that CalEEMod™ classifies as "Area Sources." CalEEMod does not associate any CO<sub>2</sub>e emissions with Architectural Coating and Consumer Products.

<sup>2</sup> Emissions were estimated using CalEEMod™ version 2013.2.2.

<sup>3</sup> While the 2011 FED uses GWPs from the IPCC Second Assessment Report (310 for N<sub>2</sub>O and 21 for CH<sub>4</sub>) while the 2014 Scoping Plan uses GWPs from the IPCC Fourth Assessment Report (298 for N<sub>2</sub>O and 25 for CH<sub>4</sub>), the differences do not change the estimated GHG emissions.

**Abbreviations:**

CalEEMod - CALifornia Emissions Estimator MODel

CO<sub>2</sub>e - carbon dioxide equivalentsCH<sub>4</sub> - methane

FED - Functional Equivalent Document

GWT - global warming potential

GHG - greenhouse gases

N<sub>2</sub>O - nitrous oxide

MT - metric tons

yr - year

**Table 12. GHG Emissions from Area Sources for the CARB 2020 NAT Condition**

Agua Hedionda 85/15 Specific Plan  
Carlsbad, California

Category <sup>1</sup>	2011 FED	2014 Scoping Plan
	CO <sub>2</sub> e Emissions <sup>2</sup>	CO <sub>2</sub> e Emissions <sup>2</sup>
	(MT/yr)	(MT/yr)
Landscaping	0.15	0.15
<b>Total</b>	<b>0.15</b>	<b>0.15</b>

Notes:

<sup>1</sup> Categories that CalEEMod™ classifies as "Area Sources." CalEEMod does not associate any CO<sub>2</sub>e emissions with Architectural Coating and Consumer Products.

<sup>2</sup> Emissions were estimated using CalEEMod™ version 2013.2.2.

<sup>3</sup> While the 2011 FED uses GWPs from the IPCC Second Assessment Report (310 for N<sub>2</sub>O and 21 for CH<sub>4</sub>) while the 2014 Scoping Plan uses GWPs from the IPCC Fourth Assessment Report (298 for N<sub>2</sub>O and 25 for CH<sub>4</sub>), the differences do not change the estimated GHG emissions.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

CO<sub>2</sub>e - carbon dioxide equivalents

CH<sub>4</sub> - methane

FED - Functional Equivalent Document

GWT - global warming potential

GHG - greenhouse gases

N<sub>2</sub>O - nitrous oxide

MT - metric tons

yr - year

**Table 13. Utility GHG Emission Factor Associated with Renewable Power Standard**

Agua Hedionda 85/15 Specific Plan  
 Carlsbad, California

Parameter	2008	2009	Average	Units
Total Energy Delivery <sup>1</sup>	20,417,664	18,959,459		MWh
from renewables <sup>2</sup>	1,269,048	1,846,802		MWh
from non-renewables	19,148,616	17,112,657		MWh
% of Total Energy From Renewables <sup>2</sup>	6%	10%		
Total CO <sub>2</sub> Emissions <sup>1</sup>	6,844,550	6,196,089		metric tons CO <sub>2</sub>
% of Total Energy From Non-Renewables	94%	90%		
CO <sub>2</sub> Emissions per Total Energy Delivered	739.05	720.49	729.77	lbs CO <sub>2</sub> /MWh delivered
CO <sub>2</sub> Emissions per Total Non-Renewable Energy <sup>3</sup>	788.03	798.24		lbs CO <sub>2</sub> /MWh delivered
<b>Estimated Emission Factors for Total Energy Delivered<sup>4</sup></b>				
2010 RPS (20%)	630.42	638.59	634.51	lbs CO <sub>2</sub> /MWh delivered
2020 RPS (33%)	<b>527.98</b>	<b>534.82</b>	<b>531.40</b>	lbs CO <sub>2</sub> /MWh delivered

Notes:

<sup>1</sup> Total energy delivery and total CO<sub>2</sub> emissions are provided in San Diego Gas and Electric Power/Utility Protocol (PUP). Reports available at: <http://www.climateregistry.org/tools/carrot/carrot-public-reports.html>. Accessed: March 2015.

<sup>2</sup> Renewable energy delivered is the sum of biogenic, geothermal and other renewable generations in PUP reports.

<sup>3</sup> The emissions metric presented here is calculated based on the total CO<sub>2</sub> emissions divided by the energy delivered from non-renewable sources.

<sup>4</sup> The emission factors for total energy delivered are estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO<sub>2</sub> emissions per total non-renewable energy metric calculated above. Two emission factors are presented here: the current 20% RPS goal for 2010 and the 33% RPS for 2020. The 33% reduction is used for Project emissions in this report. The 20% reduction is used for the First Updated Scoping Plan CARB 2020 NAT emissions in this report. The estimate provided here and the PUP reports issued by SDG&E assume that renewable energy sources do not result in any CO<sub>2</sub> emissions.

Abbreviations:

CO<sub>2</sub> - carbon dioxide

GHG - Greenhouse gas

kWh - kilowatt-hour

LADWP - Los Angeles Department of Water and Power

lbs - pounds

MWh - Megawatt-hour

PUP - Power/Utility Protocol

RPS - Renewables Portfolio Standard

Conversions:

lb/metric tonne = 2204.62

**Table 14. GHG Emissions Reduction Associated with PV Panels**

Agua Hedionda 85/15 Specific Plan  
 Carlsbad, California

Condition	Annual Unit PV Production <sup>1</sup> (kWh/sq.ft.)	GHG Intensity <sup>2</sup>			Annual Unit PV GHG Reduction				Total Electricity Demand <sup>3</sup> (kwh)
		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e	
		(lb/MWh)			(MT/sq.ft.-yr)				
2014 Scoping Plan	29.20	531.4	0.029	0.0062	7.04E-03	3.84E-07	8.17E-08	7.07E-03	1.27E+07
2011 FED	29.20	531.4	0.029	0.0062	7.04E-03	3.84E-07	8.17E-08	7.07E-03	1.27E+07

Condition	Parking Structure Roof Area <sup>4</sup> (sq.ft.)	Usable Roof Area <sup>5</sup>		Total Project Electricity Supplied by PV (kWh)	Annual Energy GHG Reduction from PV (MT CO <sub>2</sub> e/yr)
		%	(sq.ft.)		
2014 Scoping Plan	188,400	60%	113,040	3,300,768	799
2011 FED	188,400	60%	113,040	3,300,768	799

**Notes:**

<sup>1</sup> Site specific information as estimated by Sunpreme, the solar panels are estimated to produce 16 W/sq.ft. Assume energy output of five hours/day, based on Solar Estimator.org. <http://www.solar-estimate.org/>. Accessed: March 2015.

<sup>2</sup> Average GHG emission factor of San Diego Gas & Electric over 2006 and 2007 with 33% RPS.

<sup>3</sup> Calculated using CalEEMod™ version 2013.2.2 based on the Specific Plan land use information.

<sup>4</sup> Parking structure roof square footage.

**Abbreviations:**

CalEEMod - CALifornia Emissions Estimator MODEL

CO<sub>2</sub> - carbon dioxide

CO<sub>2</sub>e - carbon dioxide equivalents

CH<sub>4</sub> - methane

FED - Functional Equivalent Document

GHG - Greenhouse gas

kWh - kilowatt-hour

lbs - pounds

MWh - Megawatt-hour

MT - metric tons

N<sub>2</sub>O - nitrous oxide

PUP - Power/Utility Protocol

PV - photovoltaic

RPS - Renewables Portfolio Standard

yr - year

**Table 15. GHG Emissions Associated with Electricity and Natural Gas for the Specific Plan**

Agua Hedionda 85/15 Specific Plan  
 Carlsbad, California

**2011 FED**

CalEEMod Land Use	Specific Plan Entitlement	Electricity Use <sup>1</sup> (kWh/yr)	Natural Gas Use <sup>1</sup> (kBTU/yr)	CO <sub>2</sub> e Emissions from Energy Use <sup>2</sup>			
				2013 Title 24			Total (5% Exceed 2013 Title 24) <sup>3</sup> (MT/yr)
				Associated with Electricity Use	Associated with Natural Gas Burning	Total	
				(MT/yr)			
Regional Shopping Center	Retail	6,178,080	941,840	1,496	51	1,547	1,528
Movie Theater (No Matinee)	Theater	431,842	531,828	105	29	133	132
Supermarket	Market/Grocery	1,503,760	1,038,080	364	56	420	416
Parking Lot	Surface Parking Spaces	176,000	0	43	0	43	43
Unenclosed Parking Structure	Structured Parking Spaces	4,420,500	0	1,070	0	1,070	1,058
User Defined Recreational	Open Space/Agricultural Fields	0	0	0	0	0	0
Total		12,710,182	2,511,748	3,078	135	3,213	3,176

**2014 Scoping Plan**

CalEEMod Land Use	Specific Plan Entitlement	Electricity Use <sup>1</sup> (kWh/yr)	Natural Gas Use <sup>1</sup> (kBTU/yr)	CO <sub>2</sub> e Emissions from Energy Use <sup>2</sup>			
				2013 Title 24			Total (5% Exceed 2013 Title 24) <sup>3</sup> (MT/yr)
				Associated with Electricity Use	Associated with Natural Gas Burning	Total	
Regional Shopping Center	Retail	6,178,080	941,840	1,496	51	1,547	1,528
Movie Theater (No Matinee)	Theater	431,842	531,828	105	29	133	132
Supermarket	Market/Grocery	1,503,760	1,038,080	364	56	420	416
Parking Lot	Surface Parking Spaces	176,000	0	43	0	43	43
Unenclosed Parking Structure	Structured Parking Spaces	4,420,500	0	1,071	0	1,071	1,058
User Defined Recreational	Open Space/Agricultural Fields	0	0	0	0	0	0
Total		12,710,182	2,511,748	3,078	135	3,213	3,176

Notes:

<sup>1</sup> Energy usage for each land use was based on CalEEMod™ databases, which were obtained from CEUS or RASS studies on energy use and adjusted to account for Title 24 - 2013 building standards. See Appendix A of the CalEEMod™ user's guide for details.

<sup>2</sup> Emissions were estimated using CalEEMod™ version 2013.2.2. See report for Specific Plan design features and assumptions. Energy emissions included regulatory measure for 33% RPS for the utility provider. Emissions also include Specific Plan design feature of Energy Star appliances.

<sup>3</sup> The emissions reduction from exceeding 2013 Title 24 Standards by 5 percent is estimated by adjusting the energy use factors in CalEEMod™ for Title 24 energy usage.

Abbreviations:

BAU - Business as Usual

CalEEMod - CALifornia Emissions Estimator MODEL

CEUS - CALifornia Commercial End-Use Survey

CO<sub>2</sub>e - carbon dioxide equivalents

FED - Functional Equivalent Document

GHG - greenhouse gases

kBTU - 1,000 British thermal units

kWh - kilowatt hours

MT - metric tons

RASS - CALifornia Statewide Residential Appliance Saturation Study

yr - year

**Table 16. GHG Emissions Associated with Electricity and Natural Gas for the CARB 2020 NAT Condition**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

<b>2011 FED</b>						
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Electricity Use<sup>1</sup> (kWh/yr)</b>	<b>Natural Gas Use<sup>1</sup> (kBtu/yr)</b>	<b>CO<sub>2</sub>e Emissions from Energy Use<sup>2</sup></b>		
				<b>Associated with Electricity Use</b>	<b>Associated with Natural Gas Burning</b>	<b>Total</b>
				<b>(MT/yr)</b>		
Regional Shopping Center	Retail	7,217,520	1,176,080	2,367	63	2,430
Movie Theater (No Matinee)	Theater	478,380	626,790	157	34	191
Supermarket	Market/Grocery	1,750,300	1,213,020	574	65	639
Parking Lot	Surface Parking Spaces	176,000	0	58	0	58
Unenclosed Parking Structure	Structured Parking Spaces	4,420,500	0	1,450	0	1,450
User Defined Recreational	Open Space/Agricultural Fields	0	0	0	0	0
<b>Total</b>		<b>14,042,700</b>	<b>3,015,890</b>	<b>4,605</b>	<b>162</b>	<b>4,767</b>
<b>2014 Scoping Plan</b>						
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Electricity Use<sup>1</sup> (kWh/yr)</b>	<b>Natural Gas Use<sup>1</sup> (kBtu/yr)</b>	<b>CO<sub>2</sub>e Emissions from Energy Use<sup>2,3</sup></b>		
				<b>with Electricity Use</b>	<b>Associated with Natural Gas Burning</b>	<b>Total</b>
				<b>(MT/yr)</b>		
Regional Shopping Center	Retail	7,217,520	1,176,080	2,085	63	2,149
Movie Theater (No Matinee)	Theater	478,380	626,790	138	34	172
Supermarket	Market/Grocery	1,750,300	1,213,020	506	65	571
Parking Lot	Surface Parking Spaces	176,000	0	51	0	51
Unenclosed Parking Structure	Structured Parking Spaces	4,420,500	0	1,276	0	1,276
User Defined Recreational	Open Space/Agricultural Fields	0	0	0	0	0
<b>Total</b>		<b>14,042,700</b>	<b>3,015,890</b>	<b>4,056</b>	<b>162</b>	<b>4,218</b>

**Notes:**

<sup>1</sup> Energy usage for each land use was based on CalEEMod databases, which were obtained from CEUS or RASS studies on energy use and adjusted to account for Title 24 - 2013 building standards. See Appendix A of the CalEEMod user's guide for details.

<sup>2</sup> Emissions were estimated using CalEEMod version 2013.2.2. See report for Specific Plan design features and assumptions.

<sup>3</sup> The energy emissions for the CARB 2020 NAT First Updated Scoping Plan scenario includes the assumption that 20% RPS is achieved by the utility provider. The CARB 2020 NAT scenario assumes the CalEEMod default utility emission factor.

**Abbreviations:**

CalEEMod - CALifornia Emissions Estimator MODEL

CARB - California Air Resources Board

CEUS - California Commercial End-Use Survey

CO<sub>2</sub>e - carbon dioxide equivalents

GHG - greenhouse gases

FED - Functional Equivalent Document

kBtu - 1,000 British thermal units

kWh - kilowatt hours

MT - metric tons

NAT - No Action Taken

RASS - California Statewide Residential Appliance Saturation Study

yr - year

**Table 17. GHG Emissions Associated with Water Usage for the Specific Plan**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

<b>2011 FED</b>				
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Indoor Water Use</b>	<b>Outdoor Water Use</b>	<b>CO<sub>2</sub>e Emissions<sup>2</sup></b>
		<b>(Mgal/yr)</b>	<b>(Mgal/yr)</b>	<b>(MT/yr)</b>
Regional Shopping Center	Retail	25.4	15.2	152
Movie Theater (No Matinee)	Theater	3.8	0.2	18
Supermarket	Market/Grocery	3.6	0.1	16
Parking Lot	Surface Parking Spaces	0.0	0.0	0
Unenclosed Parking Structure	Structured Parking Spaces	0.0	0.0	0
User Defined Recreational	Open Space/Agricultural Fields	0.2	0.0	1
<b>Total</b>		<b>33.0</b>	<b>15.6</b>	<b>187</b>
<b>2014 Scoping Plan</b>				
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Indoor Water Use</b>	<b>Outdoor Water Use</b>	<b>CO<sub>2</sub>e Emissions<sup>2</sup></b>
		<b>(Mgal/yr)</b>	<b>(Mgal/yr)</b>	<b>(MT/yr)</b>
Regional Shopping Center	Retail	25.4	15.2	156
Movie Theater (No Matinee)	Theater	3.8	0.2	18
Supermarket	Market/Grocery	3.6	0.1	16
Parking Lot	Surface Parking Spaces	0.0	0.0	0
Unenclosed Parking Structure	Structured Parking Spaces	0.0	0.0	0
User Defined Recreational	Open Space/Agricultural Fields	0.2	0.0	1
<b>Total</b>		<b>33.0</b>	<b>15.6</b>	<b>191</b>

Notes:

<sup>1</sup> Water usage for Specific Plan was provided in the Water Study. See report for Specific Plan design features and assumptions. Emissions from water usage included Specific Plan Environmental Protection Features, such as: installing water saving fixtures and/or flow restrictors to reduce indoor water usage.

The Specific Plan anticipates the use of recycled water which is accounted for in this analysis.

<sup>2</sup> Emissions were estimated using CalEEMod<sup>TM</sup> version 2013.2.2.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODEL

CO<sub>2</sub>e - carbon dioxide equivalents

FED - Functional Equivalent Document

GHG - greenhouse gases

Mgal - million gallons

MT - metric tons

yr - year



**Table 18. GHG Emissions Associated with Water Usage for the CARB 2020 NAT Condition**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

<b>2011 FED</b>				
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Indoor Water Use</b>	<b>Outdoor Water Use</b>	<b>CO<sub>2</sub>e Emissions<sup>2</sup></b>
		<b>(Mgal/yr)</b>	<b>(Mgal/yr)</b>	<b>(MT/yr)</b>
Regional Shopping Center	Retail	26.5	16.3	205
Movie Theater (No Matinee)	Theater	4.0	0.3	23
Supermarket	Market/Grocery	3.7	0.1	21
Parking Lot	Surface Parking Spaces	0.0	0.0	0
Unenclosed Parking Structure	Structured Parking Spaces	0.0	0.0	0
User Defined Recreational	Open Space/Agricultural Fields	0.2	0.0	1
<b>Total</b>		<b>34.5</b>	<b>16.6</b>	<b>251</b>
<b>2014 Scoping Plan</b>				
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Indoor Water Use</b>	<b>Outdoor Water Use</b>	<b>CO<sub>2</sub>e Emissions<sup>2</sup></b>
		<b>(Mgal/yr)</b>	<b>(Mgal/yr)</b>	<b>(MT/yr)</b>
Regional Shopping Center	Retail	26.5	16.3	188
Movie Theater (No Matinee)	Theater	4.0	0.3	21
Supermarket	Market/Grocery	3.7	0.1	20
Parking Lot	Surface Parking Spaces	0.0	0.0	0
Unenclosed Parking Structure	Structured Parking Spaces	0.0	0.0	0
User Defined Recreational	Open Space/Agricultural Fields	0.2	0.0	1
<b>Total</b>		<b>34.5</b>	<b>16.6</b>	<b>230</b>

Notes:

<sup>1</sup> Water usage for CARB 2020 NAT condition was based on the water study estimates without reductions from the Specific Plan Environmental Protection Features.

<sup>2</sup> Emissions were estimated using CalEEMod™ version 2013.2.2.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODEL

CARB - California Air Resources Board

CO<sub>2</sub>e - carbon dioxide equivalents

FED - Functional Equivalent Document

GHG - greenhouse gases

Mgal - million gallons

MT - metric tons

NAT - No Action Taken

yr - year

**Table 19. GHG Emissions Associated with Waste Disposal for the Specific Plan**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

<b>2011 FED</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Waste Disposed (tons/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Waste<sup>1,2</sup> (MT/yr)</b>
Regional Shopping Center	Retail	298	136
Movie Theater (No Matinee)	Theater	189	86
Supermarket	Market/Grocery	151	69
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	0	0
<b>Total</b>		<b>638</b>	<b>290</b>
<b>2014 Scoping Plan</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Waste Disposed (tons/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Waste (MT/yr)</b>
Regional Shopping Center	Retail	298	150
Movie Theater (No Matinee)	Theater	189	95
Supermarket	Market/Grocery	151	76
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	0	0
<b>Total</b>		<b>638</b>	<b>321</b>

Notes:<sup>1</sup> Solid waste disposal emissions were estimated using CalEEMod™ version 2013.2.2.<sup>2</sup> Proposal waste disposal assumes 75% waste diversion in 2020.Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

CO<sub>2</sub>e - carbon dioxide equivalents

FED - Functional Equivalent Document

GHG - greenhouse gases

MT - metric tons

yr - year

**Table 20. GHG Emissions Associated with Waste Disposal for the CARB 2020 NAT Scenarios**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

<b>2011 FED</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Waste Disposed (tons/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Waste (MT/yr)</b>
Regional Shopping Center	Retail	512	233
Movie Theater (No Matinee)	Theater	325	148
Supermarket	Market/Grocery	259	118
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	0	0
<b>Total</b>		<b>1,097</b>	<b>499</b>
<b>2014 Scoping Plan</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Waste Disposed (tons/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Waste (MT/yr)</b>
Regional Shopping Center	Retail	512	258
Movie Theater (No Matinee)	Theater	325	163
Supermarket	Market/Grocery	259	130
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	0	0
<b>Total</b>		<b>1,097</b>	<b>552</b>

Notes:<sup>1</sup> Solid waste disposal emissions were estimated using CalEEMod version 2013.2.2.<sup>2</sup> CARB 2020 NAT waste disposal is based on existing waste diversion rates (57% per CalRecycle).Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

CARB - California Air Resources Board

CO<sub>2</sub>e - carbon dioxide equivalents

FED - Functional Equivalent Document

GHG - greenhouse gases

MT - metric tons

NAT - No Action Taken

yr - year

**Table 21. Trip Generation Estimates from Traffic Study**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

CalEEMod Land Use	Specific Plan Entitlement	Quantity	Unit	Daily Trips (trips/day)	
				Specific Plan	2020 CARB NAT
Regional Shopping Center	Retail	488	TSF	24,400	24,400
Movie Theater (No Matinee)	Theater	2500	seat	4,500	4,500
Supermarket	Market/Grocery	46	TSF	6,900	6,900
Parking Lot	Surface Parking Spaces	500	space	--	--
Unenclosed Parking Structure	Structured Parking Spaces	4202	space	--	--
User Defined Recreational	Open Space/Agricultural Fields	175.6	acre	875	875
Subtotal				36,675	36,675
Internal Trip Capture <sup>1</sup>				-3,580	-3,580
Vehicle Trips after Internalization				33,095	33,095
Pass By <sup>2</sup>				-4,036	-4,036
Diverted Trips <sup>3</sup>				-4,964	-4,964
Trip Generation Reduction from TDM <sup>4</sup>				-1,401	0
Total Net New Trips				<b>22,694</b>	<b>24,095</b>

Notes:<sup>1</sup> Assumed 10% internal trip capture for Regional Shopping Center, Theater, and Supermarket land uses.<sup>2</sup> Pass By Percentages:

Regional Shopping Center: 11% reduction for daily trips

Theater: 17% reduction for daily trips

Supermarket: 15% reduction for daily trips

<sup>3</sup> Diverted Trips Percentages: 15% reduction for daily trips.<sup>4</sup> The TDM measures are estimated to reduce the trips generation by 6% for the retail, theatre and supermarket land uses.Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODEL

TDM - Transportation Demand Management

TSF - thousand square feet

**Table 22. CalEEMod™ Model Inputs Associated with Traffic**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

CalEEMod Land Use	Specific Plan Entitlement	Unit	Specific Plan Trip Rates <sup>1</sup> (trips/day/unit)			2020 CARB NAT Trip Rates <sup>1</sup> (trips/day/unit)		
			Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Regional Shopping Center	Retail	TSF	31.30	36.43	18.40	33.30	38.75	19.57
Movie Theater (No Matinee)	Theater	seat	1.04	1.04	1.04	1.10	1.10	1.10
Supermarket	Market/Grocery	TSF	88.83	154.30	144.61	94.50	164.15	153.84
Parking Lot	Surface Parking Spaces	space	0	0	0	0	0	0
Unenclosed Parking Structure	Structured Parking Spaces	space	0	0	0	0	0	0
User Defined Recreational	Open Space/Agricultural Fields	acre	4.25	4.25	4.25	4.25	4.25	4.25

Notes:

<sup>1</sup> Trip rates were based on the Traffic Study. Weekend trip were rates proportionally adjusted based on the default weekday/weekend ratios from CalEEMod™.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODEL

DU - dwelling unit

TSF - thousand square feet

**Table 23. GHG Emissions Reduction Associated with EV Charging Stations**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

SDG&E electricity emission factor <sup>1</sup>	0.24	(MT CO <sub>2</sub> e/MWh)
Fuel Economy of Electric Vehicle <sup>2</sup>	0.3	(KWh/mile)
Gasoline CO <sub>2</sub> emission while running <sup>3</sup>	244	(gms/mile)
Annual VMT reduction per station <sup>4</sup>	73,000	(VMT/charging station)
Number of Stations <sup>5</sup>	6	
Annual VMT reduction all stations (based on charge)	438,000	(VMT/year)
GHG emissions of gasoline vehicle <sup>6</sup>	107	(MT CO <sub>2</sub> e/year)
GHG emissions of electric vehicle <sup>7</sup>	32	(MT CO <sub>2</sub> e/year)
GHG emissions reduction <sup>8</sup>	75	(MT CO <sub>2</sub> e/year)

Notes:

<sup>1</sup> CO<sub>2</sub> intensity factor for San Diego Gas and Electric (SDG&E) accounting for the 33% Renewable Portfolio Standard.

<sup>2</sup> US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel. Available at: [http://www.afdc.energy.gov/fuels/electricity\\_benefits.html](http://www.afdc.energy.gov/fuels/electricity_benefits.html). Accessed: March 2015.

<sup>3</sup> CARB, 2013. EMFAC 2011, running exhaust emission rate for light duty gasoline vehicles in San Diego APCD, aggregated for all models and speeds, averaged over all seasons for 2020. Emission rate includes reduction for Pavley and LCFS. Available at: <http://www.arb.ca.gov/emfac/>. Accessed: March 2015.

<sup>4</sup> Annual VMT reduction estimated based on a conservative estimate of four hours of charge time for a ChargePoint Level 2 charging station.

<sup>5</sup> Number of charging stations based on project description.

<sup>6</sup> GHG emissions calculated using annual VMT reduction at all stations and CO<sub>2</sub> emission rate. Methane and nitrous oxide are conservatively not included.

<sup>7</sup> GHG emissions calculated using annual VMT reduction at all stations, fuel economy of electric vehicles, along with SDG&E electricity CO<sub>2</sub>e emission factor. Methane and nitrous oxide are conservatively not included.

<sup>8</sup> GHG emissions reduction is a difference of GHG emissions of gasoline vehicles and GHG emissions of electric vehicles. Methane and nitrous oxide are conservatively not included.

Abbreviations:CO<sub>2</sub>e - equivalents of carbon dioxide

EV - electric vehicle

GHG - greenhouse gas

gms - grams

KWh - kilowatt hour

LCFS - low carbon fuel standard

MT - metric ton

MWh - megawatt hour

SDG&amp;E - San Diego Gas and Electric

VMT - vehicle miles traveled

**Table 24. GHG Emissions Associated with Traffic for the Specific Plan**

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

<b>2011 FED</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Vehicles Miles Travelled (VMT/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Traffic<sup>1</sup> (MT/yr)</b>
Regional Shopping Center	Retail	52,393,677	19,351
Movie Theater (No Matinee)	Theater	9,246,328	3,415
Supermarket	Market/Grocery	17,365,193	6,414
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	2,654,052	980
<b>Total</b>		<b>81,659,251</b>	<b>30,160</b>
<b>2014 Scoping Plan</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Vehicles Miles Travelled (VMT/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Traffic<sup>1</sup> (MT/yr)</b>
Regional Shopping Center	Retail	52,393,677	19,354
Movie Theater (No Matinee)	Theater	9,246,328	3,416
Supermarket	Market/Grocery	17,365,193	6,415
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	2,654,052	980
<b>Total</b>		<b>81,659,251</b>	<b>30,165</b>

Notes:

<sup>1</sup> Emissions were estimated using CalEEMod™ version 2013.2.2. Emissions associated with traffic included emissions during running, idling, and startup of vehicles. See report for analysis assumptions.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

FED - Functional Equivalent Document

GHG - greenhouse gases

MT - metric tons

VMT - vehicle miles traveled

yr - year

**Table 25. GHG Emissions Associated with Traffic for the CARB 2020 NAT Condition**

Agua Hedionda 85/15 Specific Plan  
 Carlsbad, California

<b>2011 FED</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Vehicles Miles Travelled (VMT/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Traffic<sup>1</sup> (MT/yr)</b>
Regional Shopping Center	Retail	55,738,166	26,974
Movie Theater (No Matinee)	Theater	9,779,770	4,733
Supermarket	Market/Grocery	18,473,625	8,940
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	2,654,052	1,284
<b>Total</b>		<b>86,645,612</b>	<b>41,931</b>
<b>2014 Scoping Plan</b>			
<b>CalEEMod Land Use</b>	<b>Specific Plan Entitlement</b>	<b>Vehicles Miles Travelled (VMT/yr)</b>	<b>CO<sub>2</sub>e Emissions Associated with Traffic<sup>1</sup> (MT/yr)</b>
Regional Shopping Center	Retail	55,738,166	22,803
Movie Theater (No Matinee)	Theater	9,779,770	4,001
Supermarket	Market/Grocery	18,473,625	7,558
Parking Lot	Surface Parking Spaces	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0
User Defined Recreational	Open Space/Agricultural Fields	2,654,052	1,086
<b>Total</b>		<b>86,645,612</b>	<b>35,447</b>

Notes:

<sup>1</sup> Emissions were estimated using CalEEMod™ version 2013.2.2. Emissions associated with traffic included emissions during running, idling, and startup of vehicles. See report for analysis assumptions.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODeL

CARB - California Air Resources Board

FED - Functional Equivalent Document

GHG - greenhouse gases

MT - metric tons

NAT - No Action Taken

VMT - vehicle miles traveled

yr - year



**Table 26. Summary of the Specific Plan and CARB 2020 NAT Condition Assumptions**

Agua Hedionda 85/15 Specific Plan  
Carlsbad, California

	2020 Specific Plan (2011 FED)	CARB 2020 NAT (2011 FED)	2020 Specific Plan (2014 Scoping Plan)	CARB 2020 NAT (2014 Scoping Plan)
<b>Electricity CO<sub>2</sub> intensity factor</b>	SDG&E intensity factor adjusted for 33% RPS.	Based on CalEEMod™ default SDG&E intensity factor.	SDG&E intensity factor adjusted for 33% RPS.	SDG&E intensity factor adjusted for 20% RPS.
<b>Vehicle trips:</b>				
<b>Number of trips generated</b>	Based on the Proposal Traffic Study trip rates.			
<b>Project Design Feature trip reductions</b>	Based on Project Traffic Study 6% Reduction from TDM	None	Based on Project Traffic Study 6% Reduction from TDM	None
<b>Vehicle emission factor</b>	Assumed Pavley, LCFS regulations and Advanced Clean Cars program are in place.	Assumed Pavley, LCFS regulations and Advanced Clean Cars program are not in place.	Assumed Pavley, LCFS regulations and Advanced Clean Cars program are in place.	Assumed Pavley regulations are in place. LCFS regulations and Advanced Clean Cars program are not in place.
<b>Energy use</b>	Building energy intensity based on Exceeding Title 24 - 2013 by 5%.	Building energy intensity based on Title 24 - 2005.	Building energy intensity based on Exceeding Title 24 - 2013 by 5%.	Building energy intensity based on Title 24 - 2005.
<b>Water use</b>	Water usage for Specific Plan was provided in the Water Study. Proposed Water Study includes installation of dual flush toilet, waterless urinal, self-closing faucet. 16.7% of outdoor water is recycled.	Water usage for Proposed Specific Plan was provided in the Water Study - without any reductions	Water usage for Specific Plan was provided in the Water Study. Proposed Water Study includes installation of dual flush toilet, waterless urinal, self-closing faucet. 16.7% of outdoor water is recycled.	Water usage for Proposed Specific Plan was provided in the Water Study - without any reductions
<b>Solid Waste generation</b>	Waste diversion of 75% (2020 California State Goal).	Waste diversion of 57% (based on actual 2007 disposal rates for the San Diego Jurisdiction).	Waste diversion of 75% (2020 California State Goal).	Waste diversion of 57% (based on actual 2007 disposal rates for the San Diego Jurisdiction).
<b>Vegetation</b>	Based on Specific Plan area.			
<b>Additional Specific Plan Features</b>	Installing solar panels and electric vehicle charging stations.	--	Installing solar panels and electric vehicle charging stations.	--
<b>Goal for Percent Reduction from NAT to Proposal</b>	--	21.7%	--	15.8%
<b>Global Warming Potentials<sup>1</sup></b>	310 for N <sub>2</sub> O and 21 for CH <sub>4</sub>	310 for N <sub>2</sub> O and 21 for CH <sub>4</sub>	298 for N <sub>2</sub> O and 25 for CH <sub>4</sub>	298 for N <sub>2</sub> O and 25 for CH <sub>4</sub>

Notes:

<sup>1</sup> Based on the 2011 FED and 2014 Scoping Plan global warming potentials

Abbreviations:

CalEEMod™ - CALifornia Emissions Estimator MODEL

CARB - California Air Resources Board

CO<sub>2</sub> - carbon dioxide

FED - Functional Equivalent Document

GWT - global warming potential

LCFS - Low Carbon Fuel Standard

NAT - No Action Taken

RPS - Renewable Portfolio Standards

SDG&E - San Diego Gas and Electric

TDM - transportation demand management

## **Appendix A**

### **CalEEMod™ Output Files**

**Cannon Road - Proposed Project Construction (CY 2019)**  
**San Diego County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	0.00	0.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2019
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

## Project Characteristics -

Land Use - Land use based on site acreage of 35.9.

Construction Phase - Construction schedule based on Project Description.

Vehicle Trips - Operational emissions evaluated separately.

Consumer Products - Operational emissions evaluated separately.

Landscape Equipment - Operational emissions evaluated separately.

Energy Use - Operational emissions evaluated separately.

Water And Wastewater - Operational emissions evaluated separately.

Solid Waste - Operational emissions evaluated separately.

Construction Off-road Equipment Mitigation - Watering 2 times/day for fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	49.00
tblConstructionPhase	NumDays	740.00	360.00
tblConstructionPhase	NumDays	50.00	15.00
tblConstructionPhase	NumDays	75.00	60.00
tblConstructionPhase	NumDays	55.00	90.00
tblConstructionPhase	NumDays	30.00	40.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	LightingElect	6.99	0.00
tblEnergyUse	LightingElect	7.79	0.00
tblEnergyUse	LightingElect	2.63	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24E	3.16	0.00
tblEnergyUse	NT24E	25.54	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	NT24NG	1.09	0.00

tblEnergyUse	NT24NG	15.42	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24E	3.89	0.00
tblEnergyUse	T24E	3.97	0.00
tblEnergyUse	T24NG	4.54	0.00
tblEnergyUse	T24NG	1.20	0.00
tblEnergyUse	T24NG	10.21	0.00
tblGrading	AcresOfGrading	150.00	187.50
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	0.00
tblSolidWaste	SolidWasteGenerationRate	259.44	0.00
tblVehicleTrips	ST_TR	1.80	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	SU_TR	1.80	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	WD_TR	1.80	0.00
tblVehicleTrips	WD_TR	42.94	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblWater	IndoorWaterUseRate	22,590,082.22	0.00
tblWater	IndoorWaterUseRate	36,147,390.48	0.00

tblWater	IndoorWaterUseRate	5,670,337.88	0.00
tblWater	OutdoorWaterUseRate	1,441,920.14	0.00
tblWater	OutdoorWaterUseRate	22,154,852.23	0.00
tblWater	OutdoorWaterUseRate	175,371.27	0.00

## 2.0 Emissions Summary

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## 2.1 Overall Construction

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3913	3.9412	3.3041	4.6900e-003	0.7290	0.1882	0.9172	0.3323	0.1736	0.5059	0.0000	415.0283	415.0283	0.0904	0.0000	416.9273
2018	1.2277	7.6858	13.3439	0.0287	1.3736	0.2638	1.6374	0.3720	0.2467	0.6187	0.0000	2,298.6427	2,298.6427	0.1275	0.0000	2,301.3208
2019	26.8337	2.9809	4.9344	0.0108	0.4862	0.1146	0.6008	0.1314	0.1068	0.2383	0.0000	855.3310	855.3310	0.0706	0.0000	856.8126
<b>Total</b>	<b>28.4527</b>	<b>14.6079</b>	<b>21.5824</b>	<b>0.0442</b>	<b>2.5887</b>	<b>0.5667</b>	<b>3.1553</b>	<b>0.8358</b>	<b>0.5271</b>	<b>1.3628</b>	<b>0.0000</b>	<b>3,569.0020</b>	<b>3,569.0020</b>	<b>0.2885</b>	<b>0.0000</b>	<b>3,575.0606</b>

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3913	3.9412	3.3041	4.6900e-003	0.3762	0.1882	0.5644	0.1626	0.1736	0.3361	0.0000	415.0280	415.0280	0.0904	0.0000	416.9269
2018	1.2277	7.6858	13.3439	0.0287	1.3736	0.2638	1.6374	0.3720	0.2467	0.6187	0.0000	2,298.6423	2,298.6423	0.1275	0.0000	2,301.3204
2019	26.8337	2.9809	4.9344	0.0108	0.4862	0.1146	0.6008	0.1314	0.1068	0.2383	0.0000	855.3308	855.3308	0.0706	0.0000	856.8123
<b>Total</b>	<b>28.4527</b>	<b>14.6078</b>	<b>21.5824</b>	<b>0.0442</b>	<b>2.2359</b>	<b>0.5667</b>	<b>2.8025</b>	<b>0.6660</b>	<b>0.5271</b>	<b>1.1931</b>	<b>0.0000</b>	<b>3,569.0010</b>	<b>3,569.0010</b>	<b>0.2885</b>	<b>0.0000</b>	<b>3,575.0597</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	13.63	0.00	11.18	20.31	0.00	12.46	0.00	0.00	0.00	0.00	0.00	0.00

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>12.2757</b>	<b>6.8000e-004</b>	<b>0.0734</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1494</b>



## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>12.2757</b>	<b>6.8000e-004</b>	<b>0.0734</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1494</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2017	7/21/2017	5	15	
2	Site Preparation	Site Preparation	7/22/2017	9/15/2017	5	40	
3	Grading	Grading	9/16/2017	12/8/2017	5	60	
4	Building Construction	Building Construction	12/9/2017	4/26/2019	5	360	
5	Paving	Paving	4/27/2019	8/30/2019	5	90	
6	Architectural Coating	Architectural Coating	8/31/2019	11/7/2019	5	49	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 187.5**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,415,575; Non-Residential Outdoor: 1,138,525 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	984.00	405.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	197.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0304	0.3202	0.2542	3.0000e-004		0.0159	0.0159		0.0149	0.0149	0.0000	27.4637	27.4637	7.5300e-003	0.0000	27.6219
<b>Total</b>	<b>0.0304</b>	<b>0.3202</b>	<b>0.2542</b>	<b>3.0000e-004</b>		<b>0.0159</b>	<b>0.0159</b>		<b>0.0149</b>	<b>0.0149</b>	<b>0.0000</b>	<b>27.4637</b>	<b>27.4637</b>	<b>7.5300e-003</b>	<b>0.0000</b>	<b>27.6219</b>

**3.2 Demolition - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	4.6000e-004	4.3800e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8082	0.8082	4.0000e-005	0.0000	0.8091
<b>Total</b>	<b>3.5000e-004</b>	<b>4.6000e-004</b>	<b>4.3800e-003</b>	<b>1.0000e-005</b>	<b>9.0000e-004</b>	<b>1.0000e-005</b>	<b>9.1000e-004</b>	<b>2.4000e-004</b>	<b>1.0000e-005</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.8082</b>	<b>0.8082</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.8091</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0304	0.3202	0.2542	3.0000e-004		0.0159	0.0159		0.0149	0.0149	0.0000	27.4636	27.4636	7.5300e-003	0.0000	27.6218
<b>Total</b>	<b>0.0304</b>	<b>0.3202</b>	<b>0.2542</b>	<b>3.0000e-004</b>		<b>0.0159</b>	<b>0.0159</b>		<b>0.0149</b>	<b>0.0149</b>	<b>0.0000</b>	<b>27.4636</b>	<b>27.4636</b>	<b>7.5300e-003</b>	<b>0.0000</b>	<b>27.6218</b>

**3.2 Demolition - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	4.6000e-004	4.3800e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8082	0.8082	4.0000e-005	0.0000	0.8091
<b>Total</b>	<b>3.5000e-004</b>	<b>4.6000e-004</b>	<b>4.3800e-003</b>	<b>1.0000e-005</b>	<b>9.0000e-004</b>	<b>1.0000e-005</b>	<b>9.1000e-004</b>	<b>2.4000e-004</b>	<b>1.0000e-005</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.8082</b>	<b>0.8082</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.8091</b>

**3.3 Site Preparation - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0351	0.7879	7.8000e-004		0.0551	0.0551		0.0507	0.0507	0.0000	72.6308	72.6308	0.0223	0.0000	73.0981
<b>Total</b>	<b>0.0968</b>	<b>1.0351</b>	<b>0.7879</b>	<b>7.8000e-004</b>	<b>0.3613</b>	<b>0.0551</b>	<b>0.4164</b>	<b>0.1986</b>	<b>0.0507</b>	<b>0.2493</b>	<b>0.0000</b>	<b>72.6308</b>	<b>72.6308</b>	<b>0.0223</b>	<b>0.0000</b>	<b>73.0981</b>

**3.3 Site Preparation - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	1.4800e-003	0.0140	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5864	2.5864	1.3000e-004	0.0000	2.5891
<b>Total</b>	<b>1.1200e-003</b>	<b>1.4800e-003</b>	<b>0.0140</b>	<b>4.0000e-005</b>	<b>2.8900e-003</b>	<b>2.0000e-005</b>	<b>2.9100e-003</b>	<b>7.7000e-004</b>	<b>2.0000e-005</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>2.5864</b>	<b>2.5864</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.5891</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1626	0.0000	0.1626	0.0894	0.0000	0.0894	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0351	0.7879	7.8000e-004		0.0551	0.0551		0.0507	0.0507	0.0000	72.6307	72.6307	0.0223	0.0000	73.0980
<b>Total</b>	<b>0.0968</b>	<b>1.0351</b>	<b>0.7879</b>	<b>7.8000e-004</b>	<b>0.1626</b>	<b>0.0551</b>	<b>0.2177</b>	<b>0.0894</b>	<b>0.0507</b>	<b>0.1401</b>	<b>0.0000</b>	<b>72.6307</b>	<b>72.6307</b>	<b>0.0223</b>	<b>0.0000</b>	<b>73.0980</b>

**3.3 Site Preparation - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	1.4800e-003	0.0140	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5864	2.5864	1.3000e-004	0.0000	2.5891
<b>Total</b>	<b>1.1200e-003</b>	<b>1.4800e-003</b>	<b>0.0140</b>	<b>4.0000e-005</b>	<b>2.8900e-003</b>	<b>2.0000e-005</b>	<b>2.9100e-003</b>	<b>7.7000e-004</b>	<b>2.0000e-005</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>2.5864</b>	<b>2.5864</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.5891</b>

**3.4 Grading - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2801	0.0000	0.2801	0.1100	0.0000	0.1100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1830	2.0878	1.4042	1.8500e-003		0.0995	0.0995		0.0916	0.0916	0.0000	171.8218	171.8218	0.0527	0.0000	172.9273
<b>Total</b>	<b>0.1830</b>	<b>2.0878</b>	<b>1.4042</b>	<b>1.8500e-003</b>	<b>0.2801</b>	<b>0.0995</b>	<b>0.3796</b>	<b>0.1100</b>	<b>0.0916</b>	<b>0.2016</b>	<b>0.0000</b>	<b>171.8218</b>	<b>171.8218</b>	<b>0.0527</b>	<b>0.0000</b>	<b>172.9273</b>



**3.4 Grading - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	2.4700e-003	0.0234	6.0000e-005	4.8100e-003	4.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	4.3106	4.3106	2.2000e-004	0.0000	4.3152
<b>Total</b>	<b>1.8600e-003</b>	<b>2.4700e-003</b>	<b>0.0234</b>	<b>6.0000e-005</b>	<b>4.8100e-003</b>	<b>4.0000e-005</b>	<b>4.8500e-003</b>	<b>1.2800e-003</b>	<b>3.0000e-005</b>	<b>1.3100e-003</b>	<b>0.0000</b>	<b>4.3106</b>	<b>4.3106</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>4.3152</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1260	0.0000	0.1260	0.0495	0.0000	0.0495	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1830	2.0878	1.4042	1.8500e-003		0.0995	0.0995		0.0916	0.0916	0.0000	171.8216	171.8216	0.0527	0.0000	172.9271
<b>Total</b>	<b>0.1830</b>	<b>2.0878</b>	<b>1.4042</b>	<b>1.8500e-003</b>	<b>0.1260</b>	<b>0.0995</b>	<b>0.2256</b>	<b>0.0495</b>	<b>0.0916</b>	<b>0.1411</b>	<b>0.0000</b>	<b>171.8216</b>	<b>171.8216</b>	<b>0.0527</b>	<b>0.0000</b>	<b>172.9271</b>

**3.4 Grading - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	2.4700e-003	0.0234	6.0000e-005	4.8100e-003	4.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	4.3106	4.3106	2.2000e-004	0.0000	4.3152
<b>Total</b>	<b>1.8600e-003</b>	<b>2.4700e-003</b>	<b>0.0234</b>	<b>6.0000e-005</b>	<b>4.8100e-003</b>	<b>4.0000e-005</b>	<b>4.8500e-003</b>	<b>1.2800e-003</b>	<b>3.0000e-005</b>	<b>1.3100e-003</b>	<b>0.0000</b>	<b>4.3106</b>	<b>4.3106</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>4.3152</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.1980	0.1360	2.0000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	17.9609	17.9609	4.4200e-003	0.0000	18.0538
<b>Total</b>	<b>0.0233</b>	<b>0.1980</b>	<b>0.1360</b>	<b>2.0000e-004</b>		<b>0.0134</b>	<b>0.0134</b>		<b>0.0126</b>	<b>0.0126</b>	<b>0.0000</b>	<b>17.9609</b>	<b>17.9609</b>	<b>4.4200e-003</b>	<b>0.0000</b>	<b>18.0538</b>

### 3.5 Building Construction - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0316	0.2653	0.3928	7.2000e-004	0.0198	3.7900e-003	0.0236	5.6500e-003	3.4900e-003	9.1400e-003	0.0000	64.4254	64.4254	4.9000e-004	0.0000	64.4356
Worker	0.0229	0.0304	0.2873	7.3000e-004	0.0592	4.4000e-004	0.0596	0.0157	4.1000e-004	0.0161	0.0000	53.0206	53.0206	2.7000e-003	0.0000	53.0772
<b>Total</b>	<b>0.0546</b>	<b>0.2957</b>	<b>0.6801</b>	<b>1.4500e-003</b>	<b>0.0789</b>	<b>4.2300e-003</b>	<b>0.0832</b>	<b>0.0214</b>	<b>3.9000e-003</b>	<b>0.0253</b>	<b>0.0000</b>	<b>117.4460</b>	<b>117.4460</b>	<b>3.1900e-003</b>	<b>0.0000</b>	<b>117.5128</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.1980	0.1360	2.0000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	17.9609	17.9609	4.4200e-003	0.0000	18.0537
<b>Total</b>	<b>0.0233</b>	<b>0.1980</b>	<b>0.1360</b>	<b>2.0000e-004</b>		<b>0.0134</b>	<b>0.0134</b>		<b>0.0126</b>	<b>0.0126</b>	<b>0.0000</b>	<b>17.9609</b>	<b>17.9609</b>	<b>4.4200e-003</b>	<b>0.0000</b>	<b>18.0537</b>

**3.5 Building Construction - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0316	0.2653	0.3928	7.2000e-004	0.0198	3.7900e-003	0.0236	5.6500e-003	3.4900e-003	9.1400e-003	0.0000	64.4254	64.4254	4.9000e-004	0.0000	64.4356
Worker	0.0229	0.0304	0.2873	7.3000e-004	0.0592	4.4000e-004	0.0596	0.0157	4.1000e-004	0.0161	0.0000	53.0206	53.0206	2.7000e-003	0.0000	53.0772
<b>Total</b>	<b>0.0546</b>	<b>0.2957</b>	<b>0.6801</b>	<b>1.4500e-003</b>	<b>0.0789</b>	<b>4.2300e-003</b>	<b>0.0832</b>	<b>0.0214</b>	<b>3.9000e-003</b>	<b>0.0253</b>	<b>0.0000</b>	<b>117.4460</b>	<b>117.4460</b>	<b>3.1900e-003</b>	<b>0.0000</b>	<b>117.5128</b>

**3.5 Building Construction - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
<b>Total</b>	<b>0.3483</b>	<b>3.0355</b>	<b>2.2880</b>	<b>3.5000e-003</b>		<b>0.1950</b>	<b>0.1950</b>		<b>0.1833</b>	<b>0.1833</b>	<b>0.0000</b>	<b>308.9844</b>	<b>308.9844</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5723</b>

### 3.5 Building Construction - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5168	4.1678	6.5339	0.0125	0.3438	0.0613	0.4051	0.0984	0.0564	0.1548	0.0000	1,101.743 3	1,101.743 3	8.2900e- 003	0.0000	1,101.917 3
Worker	0.3627	0.4825	4.5220	0.0127	1.0298	7.5200e- 003	1.0373	0.2736	6.9600e- 003	0.2806	0.0000	887.9150	887.9150	0.0436	0.0000	888.8311
<b>Total</b>	<b>0.8795</b>	<b>4.6503</b>	<b>11.0559</b>	<b>0.0252</b>	<b>1.3736</b>	<b>0.0688</b>	<b>1.4424</b>	<b>0.3720</b>	<b>0.0634</b>	<b>0.4354</b>	<b>0.0000</b>	<b>1,989.658 2</b>	<b>1,989.658 2</b>	<b>0.0519</b>	<b>0.0000</b>	<b>1,990.748 4</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e- 003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
<b>Total</b>	<b>0.3483</b>	<b>3.0355</b>	<b>2.2880</b>	<b>3.5000e- 003</b>		<b>0.1950</b>	<b>0.1950</b>		<b>0.1833</b>	<b>0.1833</b>	<b>0.0000</b>	<b>308.9841</b>	<b>308.9841</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5720</b>

### 3.5 Building Construction - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5168	4.1678	6.5339	0.0125	0.3438	0.0613	0.4051	0.0984	0.0564	0.1548	0.0000	1,101.743 3	1,101.743 3	8.2900e- 003	0.0000	1,101.917 3
Worker	0.3627	0.4825	4.5220	0.0127	1.0298	7.5200e- 003	1.0373	0.2736	6.9600e- 003	0.2806	0.0000	887.9150	887.9150	0.0436	0.0000	888.8311
<b>Total</b>	<b>0.8795</b>	<b>4.6503</b>	<b>11.0559</b>	<b>0.0252</b>	<b>1.3736</b>	<b>0.0688</b>	<b>1.4424</b>	<b>0.3720</b>	<b>0.0634</b>	<b>0.4354</b>	<b>0.0000</b>	<b>1,989.658 2</b>	<b>1,989.658 2</b>	<b>0.0519</b>	<b>0.0000</b>	<b>1,990.748 4</b>

### 3.5 Building Construction - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0988	0.8805	0.7191	1.1300e- 003		0.0540	0.0540		0.0508	0.0508	0.0000	98.3316	98.3316	0.0239	0.0000	98.8340
<b>Total</b>	<b>0.0988</b>	<b>0.8805</b>	<b>0.7191</b>	<b>1.1300e- 003</b>		<b>0.0540</b>	<b>0.0540</b>		<b>0.0508</b>	<b>0.0508</b>	<b>0.0000</b>	<b>98.3316</b>	<b>98.3316</b>	<b>0.0239</b>	<b>0.0000</b>	<b>98.8340</b>

**3.5 Building Construction - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1553	1.2207	2.0069	4.0200e-003	0.1106	0.0183	0.1290	0.0317	0.0169	0.0485	0.0000	348.4742	348.4742	2.6000e-003	0.0000	348.5289
Worker	0.1083	0.1435	1.3387	4.0800e-003	0.3314	2.4000e-003	0.3338	0.0881	2.2300e-003	0.0903	0.0000	275.4277	275.4277	0.0132	0.0000	275.7051
<b>Total</b>	<b>0.2636</b>	<b>1.3642</b>	<b>3.3456</b>	<b>8.1000e-003</b>	<b>0.4421</b>	<b>0.0207</b>	<b>0.4628</b>	<b>0.1197</b>	<b>0.0191</b>	<b>0.1388</b>	<b>0.0000</b>	<b>623.9020</b>	<b>623.9020</b>	<b>0.0158</b>	<b>0.0000</b>	<b>624.2340</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0988	0.8805	0.7191	1.1300e-003		0.0540	0.0540		0.0508	0.0508	0.0000	98.3315	98.3315	0.0239	0.0000	98.8339
<b>Total</b>	<b>0.0988</b>	<b>0.8805</b>	<b>0.7191</b>	<b>1.1300e-003</b>		<b>0.0540</b>	<b>0.0540</b>		<b>0.0508</b>	<b>0.0508</b>	<b>0.0000</b>	<b>98.3315</b>	<b>98.3315</b>	<b>0.0239</b>	<b>0.0000</b>	<b>98.8339</b>

### 3.5 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1553	1.2207	2.0069	4.0200e-003	0.1106	0.0183	0.1290	0.0317	0.0169	0.0485	0.0000	348.4742	348.4742	2.6000e-003	0.0000	348.5289
Worker	0.1083	0.1435	1.3387	4.0800e-003	0.3314	2.4000e-003	0.3338	0.0881	2.2300e-003	0.0903	0.0000	275.4277	275.4277	0.0132	0.0000	275.7051
<b>Total</b>	<b>0.2636</b>	<b>1.3642</b>	<b>3.3456</b>	<b>8.1000e-003</b>	<b>0.4421</b>	<b>0.0207</b>	<b>0.4628</b>	<b>0.1197</b>	<b>0.0191</b>	<b>0.1388</b>	<b>0.0000</b>	<b>623.9020</b>	<b>623.9020</b>	<b>0.0158</b>	<b>0.0000</b>	<b>624.2340</b>

### 3.6 Paving - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0642	0.6721	0.6464	1.0000e-003		0.0364	0.0364		0.0335	0.0335	0.0000	90.1776	90.1776	0.0285	0.0000	90.7768
Paving	8.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0650</b>	<b>0.6721</b>	<b>0.6464</b>	<b>1.0000e-003</b>		<b>0.0364</b>	<b>0.0364</b>		<b>0.0335</b>	<b>0.0335</b>	<b>0.0000</b>	<b>90.1776</b>	<b>90.1776</b>	<b>0.0285</b>	<b>0.0000</b>	<b>90.7768</b>



**3.6 Paving - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	2.3400e-003	0.0219	7.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4700e-003	0.0000	4.4985	4.4985	2.2000e-004	0.0000	4.5030
<b>Total</b>	<b>1.7700e-003</b>	<b>2.3400e-003</b>	<b>0.0219</b>	<b>7.0000e-005</b>	<b>5.4100e-003</b>	<b>4.0000e-005</b>	<b>5.4500e-003</b>	<b>1.4400e-003</b>	<b>4.0000e-005</b>	<b>1.4700e-003</b>	<b>0.0000</b>	<b>4.4985</b>	<b>4.4985</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>4.5030</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0642	0.6721	0.6464	1.0000e-003		0.0364	0.0364		0.0335	0.0335	0.0000	90.1775	90.1775	0.0285	0.0000	90.7767
Paving	8.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0650</b>	<b>0.6721</b>	<b>0.6464</b>	<b>1.0000e-003</b>		<b>0.0364</b>	<b>0.0364</b>		<b>0.0335</b>	<b>0.0335</b>	<b>0.0000</b>	<b>90.1775</b>	<b>90.1775</b>	<b>0.0285</b>	<b>0.0000</b>	<b>90.7767</b>

### 3.6 Paving - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	2.3400e-003	0.0219	7.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4700e-003	0.0000	4.4985	4.4985	2.2000e-004	0.0000	4.5030
<b>Total</b>	<b>1.7700e-003</b>	<b>2.3400e-003</b>	<b>0.0219</b>	<b>7.0000e-005</b>	<b>5.4100e-003</b>	<b>4.0000e-005</b>	<b>5.4500e-003</b>	<b>1.4400e-003</b>	<b>4.0000e-005</b>	<b>1.4700e-003</b>	<b>0.0000</b>	<b>4.4985</b>	<b>4.4985</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>4.5030</b>

### 3.7 Architectural Coating - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	26.3853					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5300e-003	0.0450	0.0451	7.0000e-005		3.1500e-003	3.1500e-003		3.1500e-003	3.1500e-003	0.0000	6.2555	6.2555	5.3000e-004	0.0000	6.2666
<b>Total</b>	<b>26.3919</b>	<b>0.0450</b>	<b>0.0451</b>	<b>7.0000e-005</b>		<b>3.1500e-003</b>	<b>3.1500e-003</b>		<b>3.1500e-003</b>	<b>3.1500e-003</b>	<b>0.0000</b>	<b>6.2555</b>	<b>6.2555</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>6.2666</b>

### 3.7 Architectural Coating - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0127	0.0168	0.1563	4.8000e-004	0.0387	2.8000e-004	0.0390	0.0103	2.6000e-004	0.0106	0.0000	32.1659	32.1659	1.5400e-003	0.0000	32.1983
<b>Total</b>	<b>0.0127</b>	<b>0.0168</b>	<b>0.1563</b>	<b>4.8000e-004</b>	<b>0.0387</b>	<b>2.8000e-004</b>	<b>0.0390</b>	<b>0.0103</b>	<b>2.6000e-004</b>	<b>0.0106</b>	<b>0.0000</b>	<b>32.1659</b>	<b>32.1659</b>	<b>1.5400e-003</b>	<b>0.0000</b>	<b>32.1983</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	26.3853					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5300e-003	0.0450	0.0451	7.0000e-005		3.1500e-003	3.1500e-003		3.1500e-003	3.1500e-003	0.0000	6.2555	6.2555	5.3000e-004	0.0000	6.2666
<b>Total</b>	<b>26.3919</b>	<b>0.0450</b>	<b>0.0451</b>	<b>7.0000e-005</b>		<b>3.1500e-003</b>	<b>3.1500e-003</b>		<b>3.1500e-003</b>	<b>3.1500e-003</b>	<b>0.0000</b>	<b>6.2555</b>	<b>6.2555</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>6.2666</b>

### 3.7 Architectural Coating - 2019

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0127	0.0168	0.1563	4.8000e-004	0.0387	2.8000e-004	0.0390	0.0103	2.6000e-004	0.0106	0.0000	32.1659	32.1659	1.5400e-003	0.0000	32.1983
Total	0.0127	0.0168	0.1563	4.8000e-004	0.0387	2.8000e-004	0.0390	0.0103	2.6000e-004	0.0106	0.0000	32.1659	32.1659	1.5400e-003	0.0000	32.1983

## 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

[illegible]

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	66	17	17
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

## 5.0 Energy Detail

### 2.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

[illegible]

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

[illegible]

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

[illegible]



### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Unmitigated	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.6302					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.9600e-003	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
<b>Total</b>	<b>12.2757</b>	<b>6.8000e-004</b>	<b>0.0734</b>	<b>1.0000e-005</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1494</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.6302					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.9600e-003	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
<b>Total</b>	<b>12.2757</b>	<b>6.8000e-004</b>	<b>0.0734</b>	<b>1.0000e-005</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1494</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Supermarket	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Supermarket	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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**Cannon Road - Proposed Project Construction (CY 2019)**  
**San Diego County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	0.00	0.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2019
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

## Project Characteristics -

Land Use - Land use based on site acreage of 35.9.

Construction Phase - Construction schedule based on Project Description.

Vehicle Trips - Operational emissions evaluated separately.

Consumer Products - Operational emissions evaluated separately.

Landscape Equipment - Operational emissions evaluated separately.

Energy Use - Operational emissions evaluated separately.

Water And Wastewater - Operational emissions evaluated separately.

Solid Waste - Operational emissions evaluated separately.

Construction Off-road Equipment Mitigation - Watering 2 times/day for fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	49.00
tblConstructionPhase	NumDays	740.00	360.00
tblConstructionPhase	NumDays	50.00	15.00
tblConstructionPhase	NumDays	75.00	60.00
tblConstructionPhase	NumDays	55.00	90.00
tblConstructionPhase	NumDays	30.00	40.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	LightingElect	6.99	0.00
tblEnergyUse	LightingElect	7.79	0.00
tblEnergyUse	LightingElect	2.63	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24E	3.16	0.00
tblEnergyUse	NT24E	25.54	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	NT24NG	1.09	0.00

tblEnergyUse	NT24NG	15.42	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24E	3.89	0.00
tblEnergyUse	T24E	3.97	0.00
tblEnergyUse	T24NG	4.54	0.00
tblEnergyUse	T24NG	1.20	0.00
tblEnergyUse	T24NG	10.21	0.00
tblGrading	AcresOfGrading	150.00	187.50
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	0.00
tblSolidWaste	SolidWasteGenerationRate	259.44	0.00
tblVehicleTrips	ST_TR	1.80	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	SU_TR	1.80	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	WD_TR	1.80	0.00
tblVehicleTrips	WD_TR	42.94	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblWater	IndoorWaterUseRate	22,590,082.22	0.00
tblWater	IndoorWaterUseRate	36,147,390.48	0.00

tblWater	IndoorWaterUseRate	5,670,337.88	0.00
tblWater	OutdoorWaterUseRate	1,441,920.14	0.00
tblWater	OutdoorWaterUseRate	22,154,852.23	0.00
tblWater	OutdoorWaterUseRate	175,371.27	0.00

## 2.0 Emissions Summary

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**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.1012	69.6666	100.2332	0.2254	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	20,355.9713	20,355.9713	1.9425	0.0000	20,396.7629
2018	9.1639	57.6123	93.9712	0.2252	10.7713	2.0198	12.7911	2.9109	1.8885	4.7994	0.0000	19,854.7804	19,854.7804	1.0764	0.0000	19,877.3846
2019	1,077.7485	52.2841	88.7421	0.2251	10.7710	1.7773	12.5482	2.9108	1.6615	4.5723	0.0000	19,379.0001	19,379.0001	1.0420	0.0000	19,400.8817
<b>Total</b>	<b>1,097.0136</b>	<b>179.5630</b>	<b>282.9464</b>	<b>0.6757</b>	<b>39.7564</b>	<b>7.1154</b>	<b>46.3087</b>	<b>15.7916</b>	<b>6.6029</b>	<b>21.8764</b>	<b>0.0000</b>	<b>59,589.7518</b>	<b>59,589.7518</b>	<b>4.0608</b>	<b>0.0000</b>	<b>59,675.0292</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.1012	69.6666	100.2332	0.2254	10.7716	3.3184	13.1154	4.5080	3.0529	7.0429	0.0000	20,355.9713	20,355.9713	1.9425	0.0000	20,396.7629
2018	9.1639	57.6123	93.9712	0.2252	10.7713	2.0198	12.7911	2.9109	1.8885	4.7994	0.0000	19,854.7804	19,854.7804	1.0764	0.0000	19,877.3846
2019	1,077.7485	52.2841	88.7421	0.2251	10.7710	1.7773	12.5482	2.9108	1.6615	4.5723	0.0000	19,379.0000	19,379.0000	1.0420	0.0000	19,400.8817
<b>Total</b>	<b>1,097.0136</b>	<b>179.5630</b>	<b>282.9464</b>	<b>0.6757</b>	<b>32.3139</b>	<b>7.1154</b>	<b>38.4548</b>	<b>10.3297</b>	<b>6.6029</b>	<b>16.4145</b>	<b>0.0000</b>	<b>59,589.7517</b>	<b>59,589.7517</b>	<b>4.0608</b>	<b>0.0000</b>	<b>59,675.0292</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	18.72	0.00	16.96	34.59	0.00	24.97	0.00	0.00	0.00	0.00	0.00	0.00

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>1.8300</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>1.8300</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2017	7/21/2017	5	15	
2	Site Preparation	Site Preparation	7/22/2017	9/15/2017	5	40	
3	Grading	Grading	9/16/2017	12/8/2017	5	60	
4	Building Construction	Building Construction	12/9/2017	4/26/2019	5	360	
5	Paving	Paving	4/27/2019	8/30/2019	5	90	
6	Architectural Coating	Architectural Coating	8/31/2019	11/7/2019	5	49	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,415,575; Non-Residential Outdoor: 1,138,525 (Architectural Coating – sqft)

#### OffRoad Equipment



Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	984.00	405.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	197.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.4674	4,036.4674	1.1073		4,059.7211
<b>Total</b>	<b>4.0482</b>	<b>42.6971</b>	<b>33.8934</b>	<b>0.0399</b>		<b>2.1252</b>	<b>2.1252</b>		<b>1.9797</b>	<b>1.9797</b>		<b>4,036.4674</b>	<b>4,036.4674</b>	<b>1.1073</b>		<b>4,059.7211</b>

**3.2 Demolition - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
<b>Total</b>	<b>0.0477</b>	<b>0.0559</b>	<b>0.6070</b>	<b>1.5600e-003</b>	<b>0.1232</b>	<b>9.0000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.3000e-004</b>	<b>0.0335</b>		<b>125.2526</b>	<b>125.2526</b>	<b>6.0400e-003</b>		<b>125.3794</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797	0.0000	4,036.4674	4,036.4674	1.1073		4,059.7211
<b>Total</b>	<b>4.0482</b>	<b>42.6971</b>	<b>33.8934</b>	<b>0.0399</b>		<b>2.1252</b>	<b>2.1252</b>		<b>1.9797</b>	<b>1.9797</b>	<b>0.0000</b>	<b>4,036.4674</b>	<b>4,036.4674</b>	<b>1.1073</b>		<b>4,059.7211</b>

**3.2 Demolition - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
<b>Total</b>	<b>0.0477</b>	<b>0.0559</b>	<b>0.6070</b>	<b>1.5600e-003</b>	<b>0.1232</b>	<b>9.0000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.3000e-004</b>	<b>0.0335</b>		<b>125.2526</b>	<b>125.2526</b>	<b>6.0400e-003</b>		<b>125.3794</b>

**3.3 Site Preparation - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>		<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

**3.3 Site Preparation - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003		150.4553
<b>Total</b>	<b>0.0572</b>	<b>0.0671</b>	<b>0.7284</b>	<b>1.8700e-003</b>	<b>0.1479</b>	<b>1.0800e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.9000e-004</b>	<b>0.0402</b>		<b>150.3031</b>	<b>150.3031</b>	<b>7.2500e-003</b>		<b>150.4553</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>8.1298</b>	<b>2.7542</b>	<b>10.8840</b>	<b>4.4688</b>	<b>2.5339</b>	<b>7.0027</b>	<b>0.0000</b>	<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

**3.3 Site Preparation - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003		150.4553
<b>Total</b>	<b>0.0572</b>	<b>0.0671</b>	<b>0.7284</b>	<b>1.8700e-003</b>	<b>0.1479</b>	<b>1.0800e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.9000e-004</b>	<b>0.0402</b>		<b>150.3031</b>	<b>150.3031</b>	<b>7.2500e-003</b>		<b>150.4553</b>

**3.4 Grading - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.3362	0.0000	9.3362	3.6681	0.0000	3.6681			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>9.3362</b>	<b>3.3172</b>	<b>12.6533</b>	<b>3.6681</b>	<b>3.0518</b>	<b>6.7199</b>		<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>

**3.4 Grading - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
<b>Total</b>	<b>0.0635</b>	<b>0.0746</b>	<b>0.8093</b>	<b>2.0800e-003</b>	<b>0.1643</b>	<b>1.1900e-003</b>	<b>0.1655</b>	<b>0.0436</b>	<b>1.1000e-003</b>	<b>0.0447</b>		<b>167.0035</b>	<b>167.0035</b>	<b>8.0500e-003</b>		<b>167.1726</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2013	0.0000	4.2013	1.6506	0.0000	1.6506			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>4.2013</b>	<b>3.3172</b>	<b>7.5185</b>	<b>1.6506</b>	<b>3.0518</b>	<b>4.7024</b>	<b>0.0000</b>	<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>

**3.4 Grading - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
<b>Total</b>	<b>0.0635</b>	<b>0.0746</b>	<b>0.8093</b>	<b>2.0800e-003</b>	<b>0.1643</b>	<b>1.1900e-003</b>	<b>0.1655</b>	<b>0.0436</b>	<b>1.1000e-003</b>	<b>0.0447</b>		<b>167.0035</b>	<b>167.0035</b>	<b>8.0500e-003</b>		<b>167.1726</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>		<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>



**3.5 Building Construction - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.8725	34.3239	42.2875	0.0962	2.6883	0.5038	3.1921	0.7670	0.4634	1.2303		9,499.594 4	9,499.594 4	0.0706		9,501.076 5
Worker	3.1263	3.6684	39.8165	0.1024	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		8,216.571 6	8,216.571 6	0.3962		8,224.891 4
<b>Total</b>	<b>6.9989</b>	<b>37.9923</b>	<b>82.1040</b>	<b>0.1986</b>	<b>10.7716</b>	<b>0.5626</b>	<b>11.3342</b>	<b>2.9111</b>	<b>0.5176</b>	<b>3.4286</b>		<b>17,716.16 60</b>	<b>17,716.16 60</b>	<b>0.4668</b>		<b>17,725.96 79</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.805 3	2,639.805 3	0.6497		2,653.449 0
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>	<b>0.0000</b>	<b>2,639.805 3</b>	<b>2,639.805 3</b>	<b>0.6497</b>		<b>2,653.449 0</b>

**3.5 Building Construction - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.8725	34.3239	42.2875	0.0962	2.6883	0.5038	3.1921	0.7670	0.4634	1.2303		9,499.594 4	9,499.594 4	0.0706		9,501.076 5
Worker	3.1263	3.6684	39.8165	0.1024	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		8,216.571 6	8,216.571 6	0.3962		8,224.891 4
<b>Total</b>	<b>6.9989</b>	<b>37.9923</b>	<b>82.1040</b>	<b>0.1986</b>	<b>10.7716</b>	<b>0.5626</b>	<b>11.3342</b>	<b>2.9111</b>	<b>0.5176</b>	<b>3.4286</b>		<b>17,716.16 60</b>	<b>17,716.16 60</b>	<b>0.4668</b>		<b>17,725.96 79</b>

**3.5 Building Construction - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.939 0	2,609.939 0	0.6387		2,623.351 7
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.939 0</b>	<b>2,609.939 0</b>	<b>0.6387</b>		<b>2,623.351 7</b>

**3.5 Building Construction - 2018****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.6452	31.0038	40.2961	0.0960	2.6880	0.4679	3.1558	0.7668	0.4303	1.1972		9,336.470 0	9,336.470 0	0.0692		9,337.922 8
Worker	2.8500	3.3477	36.1424	0.1024	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,908.371 4	7,908.371 4	0.3685		7,916.110 1
<b>Total</b>	<b>6.4953</b>	<b>34.3515</b>	<b>76.4385</b>	<b>0.1984</b>	<b>10.7713</b>	<b>0.5255</b>	<b>11.2968</b>	<b>2.9109</b>	<b>0.4837</b>	<b>3.3946</b>		<b>17,244.84 14</b>	<b>17,244.84 14</b>	<b>0.4377</b>		<b>17,254.03 29</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387		2,623.351 7
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>	<b>0.0000</b>	<b>2,609.938 9</b>	<b>2,609.938 9</b>	<b>0.6387</b>		<b>2,623.351 7</b>

**3.5 Building Construction - 2018****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.6452	31.0038	40.2961	0.0960	2.6880	0.4679	3.1558	0.7668	0.4303	1.1972		9,336.470 0	9,336.470 0	0.0692		9,337.922 8
Worker	2.8500	3.3477	36.1424	0.1024	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,908.371 4	7,908.371 4	0.3685		7,916.110 1
<b>Total</b>	<b>6.4953</b>	<b>34.3515</b>	<b>76.4385</b>	<b>0.1984</b>	<b>10.7713</b>	<b>0.5255</b>	<b>11.2968</b>	<b>2.9109</b>	<b>0.4837</b>	<b>3.3946</b>		<b>17,244.84 14</b>	<b>17,244.84 14</b>	<b>0.4377</b>		<b>17,254.03 29</b>

**3.5 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279		2,593.947 9
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>		<b>2,580.761 8</b>	<b>2,580.761 8</b>	<b>0.6279</b>		<b>2,593.947 9</b>

**3.5 Building Construction - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4133	28.2254	38.2896	0.0959	2.6876	0.4350	3.1226	0.7667	0.4001	1.1668		9,175.658 4	9,175.658 4	0.0675		9,177.075 1
Worker	2.6489	3.0937	33.3322	0.1024	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,622.579 9	7,622.579 9	0.3466		7,629.858 7
<b>Total</b>	<b>6.0622</b>	<b>31.3190</b>	<b>71.6218</b>	<b>0.1983</b>	<b>10.7710</b>	<b>0.4922</b>	<b>11.2632</b>	<b>2.9108</b>	<b>0.4532</b>	<b>3.3640</b>		<b>16,798.23 83</b>	<b>16,798.23 83</b>	<b>0.4141</b>		<b>16,806.93 38</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.761 8	2,580.761 8	0.6279		2,593.947 9
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>	<b>0.0000</b>	<b>2,580.761 8</b>	<b>2,580.761 8</b>	<b>0.6279</b>		<b>2,593.947 9</b>

### 3.5 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4133	28.2254	38.2896	0.0959	2.6876	0.4350	3.1226	0.7667	0.4001	1.1668		9,175.658 4	9,175.658 4	0.0675		9,177.075 1
Worker	2.6489	3.0937	33.3322	0.1024	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,622.579 9	7,622.579 9	0.3466		7,629.858 7
<b>Total</b>	<b>6.0622</b>	<b>31.3190</b>	<b>71.6218</b>	<b>0.1983</b>	<b>10.7710</b>	<b>0.4922</b>	<b>11.2632</b>	<b>2.9108</b>	<b>0.4532</b>	<b>3.3640</b>		<b>16,798.23 83</b>	<b>16,798.23 83</b>	<b>0.4141</b>		<b>16,806.93 38</b>

### 3.6 Paving - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4454</b>	<b>14.9353</b>	<b>14.3652</b>	<b>0.0223</b>		<b>0.8094</b>	<b>0.8094</b>		<b>0.7447</b>	<b>0.7447</b>		<b>2,208.973 1</b>	<b>2,208.973 1</b>	<b>0.6989</b>		<b>2,223.649 9</b>

**3.6 Paving - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088
<b>Total</b>	<b>0.0404</b>	<b>0.0472</b>	<b>0.5081</b>	<b>1.5600e-003</b>	<b>0.1232</b>	<b>8.7000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>116.1979</b>	<b>116.1979</b>	<b>5.2800e-003</b>		<b>116.3088</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4454</b>	<b>14.9353</b>	<b>14.3652</b>	<b>0.0223</b>		<b>0.8094</b>	<b>0.8094</b>		<b>0.7447</b>	<b>0.7447</b>	<b>0.0000</b>	<b>2,208.973 1</b>	<b>2,208.973 1</b>	<b>0.6989</b>		<b>2,223.649 9</b>

### 3.6 Paving - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088
<b>Total</b>	<b>0.0404</b>	<b>0.0472</b>	<b>0.5081</b>	<b>1.5600e-003</b>	<b>0.1232</b>	<b>8.7000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>116.1979</b>	<b>116.1979</b>	<b>5.2800e-003</b>		<b>116.3088</b>

### 3.7 Architectural Coating - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,076.9517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
<b>Total</b>	<b>1,077.2182</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>281.9473</b>



**3.7 Architectural Coating - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5303	0.6194	6.6732	0.0205	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,526.065 3	1,526.065 3	0.0694		1,527.522 5
<b>Total</b>	<b>0.5303</b>	<b>0.6194</b>	<b>6.6732</b>	<b>0.0205</b>	<b>1.6183</b>	<b>0.0115</b>	<b>1.6298</b>	<b>0.4293</b>	<b>0.0106</b>	<b>0.4399</b>		<b>1,526.065 3</b>	<b>1,526.065 3</b>	<b>0.0694</b>		<b>1,527.522 5</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,076.951 7					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
<b>Total</b>	<b>1,077.218 2</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>281.9473</b>

### 3.7 Architectural Coating - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5303	0.6194	6.6732	0.0205	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,526.065 3	1,526.065 3	0.0694		1,527.522 5
<b>Total</b>	<b>0.5303</b>	<b>0.6194</b>	<b>6.6732</b>	<b>0.0205</b>	<b>1.6183</b>	<b>0.0115</b>	<b>1.6298</b>	<b>0.4293</b>	<b>0.0106</b>	<b>0.4399</b>		<b>1,526.065 3</b>	<b>1,526.065 3</b>	<b>0.0694</b>		<b>1,527.522 5</b>

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	66	17	17
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

## 5.0 Energy Detail

### 2.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Unmitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>		<b>1.8300</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>		<b>1.8300</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

**Cannon Road - Proposed Project Construction (CY 2019)**  
**San Diego County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	0.00	0.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2019
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data



## Project Characteristics -

Land Use - Land use based on site acreage of 35.9.

Construction Phase - Construction schedule based on Project Description.

Vehicle Trips - Operational emissions evaluated separately.

Consumer Products - Operational emissions evaluated separately.

Landscape Equipment - Operational emissions evaluated separately.

Energy Use - Operational emissions evaluated separately.

Water And Wastewater - Operational emissions evaluated separately.

Solid Waste - Operational emissions evaluated separately.

Construction Off-road Equipment Mitigation - Watering 2 times/day for fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	49.00
tblConstructionPhase	NumDays	740.00	360.00
tblConstructionPhase	NumDays	50.00	15.00
tblConstructionPhase	NumDays	75.00	60.00
tblConstructionPhase	NumDays	55.00	90.00
tblConstructionPhase	NumDays	30.00	40.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	LightingElect	6.99	0.00
tblEnergyUse	LightingElect	7.79	0.00
tblEnergyUse	LightingElect	2.63	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24E	3.16	0.00
tblEnergyUse	NT24E	25.54	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	NT24NG	1.09	0.00

tblEnergyUse	NT24NG	15.42	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24E	3.89	0.00
tblEnergyUse	T24E	3.97	0.00
tblEnergyUse	T24NG	4.54	0.00
tblEnergyUse	T24NG	1.20	0.00
tblEnergyUse	T24NG	10.21	0.00
tblGrading	AcresOfGrading	150.00	187.50
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	0.00
tblSolidWaste	SolidWasteGenerationRate	259.44	0.00
tblVehicleTrips	ST_TR	1.80	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	SU_TR	1.80	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	WD_TR	1.80	0.00
tblVehicleTrips	WD_TR	42.94	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblWater	IndoorWaterUseRate	22,590,082.22	0.00
tblWater	IndoorWaterUseRate	36,147,390.48	0.00

tblWater	IndoorWaterUseRate	5,670,337.88	0.00
tblWater	OutdoorWaterUseRate	1,441,920.14	0.00
tblWater	OutdoorWaterUseRate	22,154,852.23	0.00
tblWater	OutdoorWaterUseRate	175,371.27	0.00

## 2.0 Emissions Summary

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**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.8716	69.6757	114.0496	0.2186	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	19,782.35 46	19,782.35 46	1.9425	0.0000	19,823.14 62
2018	9.8577	58.7400	107.2784	0.2184	10.7713	2.0245	12.7958	2.9109	1.8928	4.8037	0.0000	19,300.63 54	19,300.63 54	1.0784	0.0000	19,323.28 09
2019	1,077.775 9	53.3013	101.6304	0.2183	10.7710	1.7815	12.5525	2.9108	1.6654	4.5762	0.0000	18,843.02 42	18,843.02 42	1.0440	0.0000	18,864.94 80
<b>Total</b>	<b>1,098.505 2</b>	<b>181.7170</b>	<b>322.9584</b>	<b>0.6553</b>	<b>39.7564</b>	<b>7.1244</b>	<b>46.3177</b>	<b>15.7916</b>	<b>6.6111</b>	<b>21.8846</b>	<b>0.0000</b>	<b>57,926.01 43</b>	<b>57,926.01 43</b>	<b>4.0648</b>	<b>0.0000</b>	<b>58,011.37 52</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.8716	69.6757	114.0496	0.2186	10.7716	3.3184	13.1205	4.5080	3.0529	7.0429	0.0000	19,782.35 46	19,782.35 46	1.9425	0.0000	19,823.14 62
2018	9.8577	58.7400	107.2784	0.2184	10.7713	2.0245	12.7958	2.9109	1.8928	4.8037	0.0000	19,300.63 54	19,300.63 54	1.0784	0.0000	19,323.28 09
2019	1,077.775 9	53.3013	101.6304	0.2183	10.7710	1.7815	12.5525	2.9108	1.6654	4.5762	0.0000	18,843.02 42	18,843.02 42	1.0440	0.0000	18,864.94 80
<b>Total</b>	<b>1,098.505 2</b>	<b>181.7170</b>	<b>322.9584</b>	<b>0.6553</b>	<b>32.3139</b>	<b>7.1244</b>	<b>38.4688</b>	<b>10.3297</b>	<b>6.6111</b>	<b>16.4227</b>	<b>0.0000</b>	<b>57,926.01 43</b>	<b>57,926.01 43</b>	<b>4.0648</b>	<b>0.0000</b>	<b>58,011.37 52</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	18.72	0.00	16.95	34.59	0.00	24.96	0.00	0.00	0.00	0.00	0.00	0.00

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>1.8300</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>	<b>0.0000</b>	<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>1.8300</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2017	7/21/2017	5	15	
2	Site Preparation	Site Preparation	7/22/2017	9/15/2017	5	40	
3	Grading	Grading	9/16/2017	12/8/2017	5	60	
4	Building Construction	Building Construction	12/9/2017	4/26/2019	5	360	
5	Paving	Paving	4/27/2019	8/30/2019	5	90	
6	Architectural Coating	Architectural Coating	8/31/2019	11/7/2019	5	49	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,415,575; Non-Residential Outdoor: 1,138,525 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**



Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	984.00	405.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	197.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.4674	4,036.4674	1.1073		4,059.7211
<b>Total</b>	<b>4.0482</b>	<b>42.6971</b>	<b>33.8934</b>	<b>0.0399</b>		<b>2.1252</b>	<b>2.1252</b>		<b>1.9797</b>	<b>1.9797</b>		<b>4,036.4674</b>	<b>4,036.4674</b>	<b>1.1073</b>		<b>4,059.7211</b>

**3.2 Demolition - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
<b>Total</b>	<b>0.0504</b>	<b>0.0628</b>	<b>0.5868</b>	<b>1.4700e-003</b>	<b>0.1232</b>	<b>9.0000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.3000e-004</b>	<b>0.0335</b>		<b>117.6222</b>	<b>117.6222</b>	<b>6.0400e-003</b>		<b>117.7491</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797	0.0000	4,036.4674	4,036.4674	1.1073		4,059.7211
<b>Total</b>	<b>4.0482</b>	<b>42.6971</b>	<b>33.8934</b>	<b>0.0399</b>		<b>2.1252</b>	<b>2.1252</b>		<b>1.9797</b>	<b>1.9797</b>	<b>0.0000</b>	<b>4,036.4674</b>	<b>4,036.4674</b>	<b>1.1073</b>		<b>4,059.7211</b>

**3.2 Demolition - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
<b>Total</b>	<b>0.0504</b>	<b>0.0628</b>	<b>0.5868</b>	<b>1.4700e-003</b>	<b>0.1232</b>	<b>9.0000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.3000e-004</b>	<b>0.0335</b>		<b>117.6222</b>	<b>117.6222</b>	<b>6.0400e-003</b>		<b>117.7491</b>

**3.3 Site Preparation - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>		<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

**3.3 Site Preparation - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
<b>Total</b>	<b>0.0604</b>	<b>0.0753</b>	<b>0.7041</b>	<b>1.7600e-003</b>	<b>0.1479</b>	<b>1.0800e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.9000e-004</b>	<b>0.0402</b>		<b>141.1467</b>	<b>141.1467</b>	<b>7.2500e-003</b>		<b>141.2989</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>8.1298</b>	<b>2.7542</b>	<b>10.8840</b>	<b>4.4688</b>	<b>2.5339</b>	<b>7.0027</b>	<b>0.0000</b>	<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

### 3.3 Site Preparation - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
<b>Total</b>	<b>0.0604</b>	<b>0.0753</b>	<b>0.7041</b>	<b>1.7600e-003</b>	<b>0.1479</b>	<b>1.0800e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.9000e-004</b>	<b>0.0402</b>		<b>141.1467</b>	<b>141.1467</b>	<b>7.2500e-003</b>		<b>141.2989</b>

### 3.4 Grading - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.3362	0.0000	9.3362	3.6681	0.0000	3.6681			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>9.3362</b>	<b>3.3172</b>	<b>12.6533</b>	<b>3.6681</b>	<b>3.0518</b>	<b>6.7199</b>		<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>

**3.4 Grading - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
<b>Total</b>	<b>0.0671</b>	<b>0.0837</b>	<b>0.7823</b>	<b>1.9500e-003</b>	<b>0.1643</b>	<b>1.1900e-003</b>	<b>0.1655</b>	<b>0.0436</b>	<b>1.1000e-003</b>	<b>0.0447</b>		<b>156.8296</b>	<b>156.8296</b>	<b>8.0500e-003</b>		<b>156.9987</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2013	0.0000	4.2013	1.6506	0.0000	1.6506			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>4.2013</b>	<b>3.3172</b>	<b>7.5185</b>	<b>1.6506</b>	<b>3.0518</b>	<b>4.7024</b>	<b>0.0000</b>	<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>

**3.4 Grading - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
<b>Total</b>	<b>0.0671</b>	<b>0.0837</b>	<b>0.7823</b>	<b>1.9500e-003</b>	<b>0.1643</b>	<b>1.1900e-003</b>	<b>0.1655</b>	<b>0.0436</b>	<b>1.1000e-003</b>	<b>0.0447</b>		<b>156.8296</b>	<b>156.8296</b>	<b>8.0500e-003</b>		<b>156.9987</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>		<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

**3.5 Building Construction - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4659	35.1367	57.4292	0.0957	2.6883	0.5089	3.1972	0.7670	0.4681	1.2350		9,426.5315	9,426.5315	0.0725		9,428.0538
Worker	3.3033	4.1161	38.4912	0.0961	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		7,716.0178	7,716.0178	0.3962		7,724.3375
<b>Total</b>	<b>7.7692</b>	<b>39.2528</b>	<b>95.9204</b>	<b>0.1918</b>	<b>10.7716</b>	<b>0.5677</b>	<b>11.3393</b>	<b>2.9111</b>	<b>0.5223</b>	<b>3.4333</b>		<b>17,142.5493</b>	<b>17,142.5493</b>	<b>0.4687</b>		<b>17,152.3913</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>	<b>0.0000</b>	<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>



**3.5 Building Construction - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4659	35.1367	57.4292	0.0957	2.6883	0.5089	3.1972	0.7670	0.4681	1.2350		9,426.5315	9,426.5315	0.0725		9,428.0538
Worker	3.3033	4.1161	38.4912	0.0961	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		7,716.0178	7,716.0178	0.3962		7,724.3375
<b>Total</b>	<b>7.7692</b>	<b>39.2528</b>	<b>95.9204</b>	<b>0.1918</b>	<b>10.7716</b>	<b>0.5677</b>	<b>11.3393</b>	<b>2.9111</b>	<b>0.5223</b>	<b>3.4333</b>		<b>17,142.5493</b>	<b>17,142.5493</b>	<b>0.4687</b>		<b>17,152.3913</b>

**3.5 Building Construction - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.9390</b>	<b>2,609.9390</b>	<b>0.6387</b>		<b>2,623.3517</b>

**3.5 Building Construction - 2018****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1870	31.7230	54.9838	0.0955	2.6880	0.4725	3.1605	0.7668	0.4346	1.2015		9,264.489 2	9,264.489 2	0.0711		9,265.983 2
Worker	3.0020	3.7562	34.7619	0.0961	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,426.207 3	7,426.207 3	0.3685		7,433.946 0
<b>Total</b>	<b>7.1890</b>	<b>35.4792</b>	<b>89.7457</b>	<b>0.1916</b>	<b>10.7713</b>	<b>0.5302</b>	<b>11.3015</b>	<b>2.9109</b>	<b>0.4880</b>	<b>3.3989</b>		<b>16,690.69 65</b>	<b>16,690.69 65</b>	<b>0.4397</b>		<b>16,699.92 92</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387		2,623.351 7
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>	<b>0.0000</b>	<b>2,609.938 9</b>	<b>2,609.938 9</b>	<b>0.6387</b>		<b>2,623.351 7</b>

**3.5 Building Construction - 2018****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1870	31.7230	54.9838	0.0955	2.6880	0.4725	3.1605	0.7668	0.4346	1.2015		9,264.489 2	9,264.489 2	0.0711		9,265.983 2
Worker	3.0020	3.7562	34.7619	0.0961	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,426.207 3	7,426.207 3	0.3685		7,433.946 0
<b>Total</b>	<b>7.1890</b>	<b>35.4792</b>	<b>89.7457</b>	<b>0.1916</b>	<b>10.7713</b>	<b>0.5302</b>	<b>11.3015</b>	<b>2.9109</b>	<b>0.4880</b>	<b>3.3989</b>		<b>16,690.69 65</b>	<b>16,690.69 65</b>	<b>0.4397</b>		<b>16,699.92 92</b>

**3.5 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279		2,593.947 9
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>		<b>2,580.761 8</b>	<b>2,580.761 8</b>	<b>0.6279</b>		<b>2,593.947 9</b>

### 3.5 Building Construction - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.9040	28.8655	52.5716	0.0954	2.6876	0.4392	3.1269	0.7667	0.4040	1.1707		9,104.7640	9,104.7640	0.0695		9,106.2228
Worker	2.7860	3.4708	31.9385	0.0961	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,157.4985	7,157.4985	0.3466		7,164.7774
<b>Total</b>	<b>6.6900</b>	<b>32.3363</b>	<b>84.5101</b>	<b>0.1915</b>	<b>10.7710</b>	<b>0.4965</b>	<b>11.2674</b>	<b>2.9108</b>	<b>0.4571</b>	<b>3.3679</b>		<b>16,262.2625</b>	<b>16,262.2625</b>	<b>0.4161</b>		<b>16,271.0002</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>	<b>0.0000</b>	<b>2,580.7618</b>	<b>2,580.7618</b>	<b>0.6279</b>		<b>2,593.9479</b>

### 3.5 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.9040	28.8655	52.5716	0.0954	2.6876	0.4392	3.1269	0.7667	0.4040	1.1707		9,104.764 0	9,104.764 0	0.0695		9,106.222 8
Worker	2.7860	3.4708	31.9385	0.0961	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,157.498 5	7,157.498 5	0.3466		7,164.777 4
<b>Total</b>	<b>6.6900</b>	<b>32.3363</b>	<b>84.5101</b>	<b>0.1915</b>	<b>10.7710</b>	<b>0.4965</b>	<b>11.2674</b>	<b>2.9108</b>	<b>0.4571</b>	<b>3.3679</b>		<b>16,262.26 25</b>	<b>16,262.26 25</b>	<b>0.4161</b>		<b>16,271.00 02</b>

### 3.6 Paving - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4454</b>	<b>14.9353</b>	<b>14.3652</b>	<b>0.0223</b>		<b>0.8094</b>	<b>0.8094</b>		<b>0.7447</b>	<b>0.7447</b>		<b>2,208.973 1</b>	<b>2,208.973 1</b>	<b>0.6989</b>		<b>2,223.649 9</b>

### 3.6 Paving - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003		109.2192
<b>Total</b>	<b>0.0425</b>	<b>0.0529</b>	<b>0.4869</b>	<b>1.4600e-003</b>	<b>0.1232</b>	<b>8.7000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>109.1082</b>	<b>109.1082</b>	<b>5.2800e-003</b>		<b>109.2192</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4454</b>	<b>14.9353</b>	<b>14.3652</b>	<b>0.0223</b>		<b>0.8094</b>	<b>0.8094</b>		<b>0.7447</b>	<b>0.7447</b>	<b>0.0000</b>	<b>2,208.973 1</b>	<b>2,208.973 1</b>	<b>0.6989</b>		<b>2,223.649 9</b>

### 3.6 Paving - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003		109.2192
<b>Total</b>	<b>0.0425</b>	<b>0.0529</b>	<b>0.4869</b>	<b>1.4600e-003</b>	<b>0.1232</b>	<b>8.7000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>109.1082</b>	<b>109.1082</b>	<b>5.2800e-003</b>		<b>109.2192</b>

### 3.7 Architectural Coating - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,076.9517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
<b>Total</b>	<b>1,077.2182</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>281.9473</b>

### 3.7 Architectural Coating - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5578	0.6949	6.3942	0.0192	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,432.9545	1,432.9545	0.0694		1,434.4117
<b>Total</b>	<b>0.5578</b>	<b>0.6949</b>	<b>6.3942</b>	<b>0.0192</b>	<b>1.6183</b>	<b>0.0115</b>	<b>1.6298</b>	<b>0.4293</b>	<b>0.0106</b>	<b>0.4399</b>		<b>1,432.9545</b>	<b>1,432.9545</b>	<b>0.0694</b>		<b>1,434.4117</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,076.9517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
<b>Total</b>	<b>1,077.2182</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>281.9473</b>



### 3.7 Architectural Coating - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5578	0.6949	6.3942	0.0192	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,432.9545	1,432.9545	0.0694		1,434.4117
<b>Total</b>	<b>0.5578</b>	<b>0.6949</b>	<b>6.3942</b>	<b>0.0192</b>	<b>1.6183</b>	<b>0.0115</b>	<b>1.6298</b>	<b>0.4293</b>	<b>0.0106</b>	<b>0.4399</b>		<b>1,432.9545</b>	<b>1,432.9545</b>	<b>0.0694</b>		<b>1,434.4117</b>

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	66	17	17
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

## 5.0 Energy Detail

### 2.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Unmitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>		<b>1.8300</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
<b>Total</b>	<b>67.3031</b>	<b>7.5800e-003</b>	<b>0.8157</b>	<b>6.0000e-005</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>1.7315</b>	<b>1.7315</b>	<b>4.6900e-003</b>		<b>1.8300</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

**Cannon Road - Specific Plan Operational GHG (CY 2020)**  
**San Diego County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	531.4	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes 33% RPS.

Land Use - Land uses based on Specific Plan.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Includes Advanced Clean Car reduction.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMOD default values.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Energy Mitigation - 30% reduction to update to Title 24 - 2013 building standards. Using Energy Star appliances.

Water Mitigation - According to water study, 16.7% of outdoor water use will be reclaimed water.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	CO2IntensityFactor	720.49	531.4
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	512.40	298.00
tblSolidWaste	SolidWasteGenerationRate	259.44	151.00



tblSolidWaste	SolidWasteGenerationRate	0.00	189.00
tblVehicleEF	LDA	244.25	233.76
tblVehicleEF	LDA	52.29	50.63
tblVehicleEF	LDT1	297.79	293.48
tblVehicleEF	LDT1	63.53	62.90
tblVehicleEF	LDT2	364.72	358.39
tblVehicleEF	LDT2	77.49	76.52
tblVehicleEF	MDV	489.56	483.35
tblVehicleEF	MDV	103.31	102.36
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00

tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.04
tblVehicleTrips	ST_TR	49.97	36.43
tblVehicleTrips	ST_TR	177.59	154.30
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.04
tblVehicleTrips	SU_TR	25.24	18.40
tblVehicleTrips	SU_TR	166.44	144.61
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.04
tblVehicleTrips	WD_TR	42.94	31.30
tblVehicleTrips	WD_TR	102.24	88.83
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	3,849,476.00
tblWater	IndoorWaterUseRate	36,147,390.48	25,377,913.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,582,986.00
tblWater	IndoorWaterUseRate	0.00	218,206.00

tblWater	OutdoorWaterUseRate	1,441,920.14	245,811.00
tblWater	OutdoorWaterUseRate	22,154,852.23	15,554,006.00
tblWater	OutdoorWaterUseRate	175,371.27	110,802.00

## 2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Energy											0.0000	3,438.2688	3,438.2688	0.1822	0.0399	3,454.4664
Mobile											0.0000	30,135.6319	30,135.6319	1.1717	0.0000	30,160.2381
Waste											129.5082	0.0000	129.5082	7.6537	0.0000	290.2363
Water											10.4784	146.2702	156.7487	1.0842	0.0271	187.9070
<b>Total</b>											<b>139.9867</b>	<b>33,720.3123</b>	<b>33,860.2990</b>	<b>10.0922</b>	<b>0.0670</b>	<b>34,092.9972</b>

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Energy											0.0000	3,197.6877	3,197.6877	0.1698	0.0371	3,212.7378
Mobile											0.0000	30,135.6319	30,135.6319	1.1717	0.0000	30,160.2381
Waste											129.5082	0.0000	129.5082	7.6537	0.0000	290.2363
Water											10.4784	145.3845	155.8629	1.0840	0.0270	187.0004
<b>Total</b>											<b>139.9867</b>	<b>33,478.8455</b>	<b>33,618.8321</b>	<b>10.0796</b>	<b>0.0641</b>	<b>33,850.3621</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>	<b>0.71</b>	<b>0.13</b>	<b>4.35</b>	<b>0.71</b>

## 2.3 Vegetation

### Vegetation

	CO2e
Category	MT
Vegetation Land Change	-536.2500
<b>Total</b>	<b>-536.2500</b>

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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### 3.1 Mitigation Measures Construction

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	30,135.63 19	30,135.63 19	1.1717	0.0000	30,160.23 81
Unmitigated											0.0000	30,135.63 19	30,135.63 19	1.1717	0.0000	30,160.23 81

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,600.00	2,600.00	2600.00	9,246,328	9,246,328
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,274.40	17,777.84	8979.20	52,393,677	52,393,677
Supermarket	4,086.18	7,097.80	6652.06	17,365,193	17,365,193
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	22,706.88	28,221.94	18,977.56	81,659,251	81,659,251

### 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated											0.0000	134.0366	134.0366	2.5700e-003	2.4600e-003	134.8523
NaturalGas Unmitigated											0.0000	154.6371	154.6371	2.9600e-003	2.8400e-003	155.5782
Electricity Mitigated											0.0000	3,063.6512	3,063.6512	0.1672	0.0346	3,077.8856
Electricity Unmitigated											0.0000	3,283.6317	3,283.6317	0.1792	0.0371	3,298.8881



## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Movie Theater (No Matinee)	601290											0.0000	32.0871	32.0871	6.2000e-004	5.9000e-004	32.2824
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.11752e+006											0.0000	59.6351	59.6351	1.1400e-003	1.0900e-003	59.9981
Supermarket	1.17898e+006											0.0000	62.9149	62.9149	1.2100e-003	1.1500e-003	63.2978
Unenclosed Parking Structure	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>												<b>0.0000</b>	<b>154.6371</b>	<b>154.6371</b>	<b>2.9700e-003</b>	<b>2.8300e-003</b>	<b>155.5782</b>

**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Movie Theater (No Matinee)	531828											0.0000	28.3804	28.3804	5.4000e-004	5.2000e-004	28.5531
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	941840											0.0000	50.2602	50.2602	9.6000e-004	9.2000e-004	50.5660
Supermarket	1.03808e+006											0.0000	55.3960	55.3960	1.0600e-003	1.0200e-003	55.7331
Unenclosed Parking Structure	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>												<b>0.0000</b>	<b>134.0366</b>	<b>134.0366</b>	<b>2.5600e-003</b>	<b>2.4600e-003</b>	<b>134.8523</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	459000	110.6369	6.0400e-003	1.2500e-003	111.1509
Parking Lot	176000	42.4229	2.3200e-003	4.8000e-004	42.6200
Regional Shopping Center	6.85152e+006	1,651.4834	0.0901	0.0187	1,659.1566
Supermarket	1.7158e+006	413.5747	0.0226	4.6700e-003	415.4963
Unenclosed Parking Structure	4.4205e+006	1,065.5138	0.0582	0.0120	1,070.4644
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3,283.6317</b>	<b>0.1792</b>	<b>0.0371</b>	<b>3,298.8882</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	431842	104.0909	5.6800e-003	1.1800e-003	104.5745
Parking Lot	176000	42.4229	2.3200e-003	4.8000e-004	42.6200
Regional Shopping Center	6.17808e+006	1,489.1581	0.0813	0.0168	1,496.0771
Supermarket	1.50376e+006	362.4655	0.0198	4.0900e-003	364.1496
Unenclosed Parking Structure	4.4205e+006	1,065.5138	0.0582	0.0120	1,070.4644
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3,063.6512</b>	<b>0.1672</b>	<b>0.0346</b>	<b>3,077.8856</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Unmitigated											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
<b>Total</b>											<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1493</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
<b>Total</b>											<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1493</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	156.7487	1.0842	0.0271	187.9070
Mitigated	155.8629	1.0840	0.0270	187.0004

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	3.84948 / 0.245811	13.9614	0.1261	3.1100e-003	17.5729
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	25.3779 / 15.554	129.3543	0.8336	0.0209	153.3367
Supermarket	3.58299 / 0.110802	12.6789	0.1174	2.8900e-003	16.0389
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0.218206 / 0	0.7541	7.1500e-003	1.8000e-004	0.9586
<b>Total</b>		<b>156.7487</b>	<b>1.0842</b>	<b>0.0271</b>	<b>187.9070</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	3.84948 / 0.240701	13.9477	0.1261	3.1000e-003	17.5572
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	25.3779 / 15.2307	128.4884	0.8334	0.0209	152.4539
Supermarket	3.58299 / 0.108499	12.6727	0.1174	2.8800e-003	16.0309
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0.218206 / 0	0.7541	7.1500e-003	1.8000e-004	0.9585
<b>Total</b>		<b>155.8629</b>	<b>1.0840</b>	<b>0.0270</b>	<b>187.0004</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste



**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	129.5082	7.6537	0.0000	290.2363
Unmitigated	129.5082	7.6537	0.0000	290.2363

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	298	60.4913	3.5749	0.0000	135.5649
Supermarket	151	30.6516	1.8115	0.0000	68.6923
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	189	38.3653	2.2673	0.0000	85.9791
<b>Total</b>		<b>129.5082</b>	<b>7.6537</b>	<b>0.0000</b>	<b>290.2363</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	298	60.4913	3.5749	0.0000	135.5649
Supermarket	151	30.6516	1.8115	0.0000	68.6923
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	189	38.3653	2.2673	0.0000	85.9791
<b>Total</b>		<b>129.5082</b>	<b>7.6537</b>	<b>0.0000</b>	<b>290.2363</b>

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-536.2500	0.0000	0.0000	-536.2500

## 10.1 Vegetation Land Change

### Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Scrub	157.6 / 120.1	-536.2500	0.0000	0.0000	-536.2500
<b>Total</b>		<b>-536.2500</b>	<b>0.0000</b>	<b>0.0000</b>	<b>-536.2500</b>

**Cannon Road - Specific Plan Operational GHG (CY 2020)**  
**San Diego County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	531.4	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes 33% RPS.

Land Use - Land uses based on Specific Plan.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Includes Advanced Clean Car reduction.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMOD default values.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Energy Mitigation - 30% reduction to update to Title 24 - 2013 building standards. Using Energy Star appliances.

Water Mitigation - According to water study, 16.7% of outdoor water use will be reclaimed water.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	CO2IntensityFactor	720.49	531.4
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	512.40	298.00
tblSolidWaste	SolidWasteGenerationRate	259.44	151.00

tblSolidWaste	SolidWasteGenerationRate	0.00	189.00
tblVehicleEF	LDA	244.25	233.76
tblVehicleEF	LDA	52.29	50.63
tblVehicleEF	LDT1	297.79	293.48
tblVehicleEF	LDT1	63.53	62.90
tblVehicleEF	LDT2	364.72	358.39
tblVehicleEF	LDT2	77.49	76.52
tblVehicleEF	MDV	489.56	483.35
tblVehicleEF	MDV	103.31	102.36
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00

tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.04
tblVehicleTrips	ST_TR	49.97	36.43
tblVehicleTrips	ST_TR	177.59	154.30
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.04
tblVehicleTrips	SU_TR	25.24	18.40
tblVehicleTrips	SU_TR	166.44	144.61
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.04
tblVehicleTrips	WD_TR	42.94	31.30
tblVehicleTrips	WD_TR	102.24	88.83
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	3,849,476.00
tblWater	IndoorWaterUseRate	36,147,390.48	25,377,913.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,582,986.00
tblWater	IndoorWaterUseRate	0.00	218,206.00

tblWater	OutdoorWaterUseRate	1,441,920.14	245,811.00
tblWater	OutdoorWaterUseRate	22,154,852.23	15,554,006.00
tblWater	OutdoorWaterUseRate	175,371.27	110,802.00

## 2.0 Emissions Summary

[illegible]



## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												934.0177	934.0177	0.0179	0.0171	939.7020
Mobile												238,967.9323	238,967.9323	8.7302		239,151.2654
<b>Total</b>												<b>239,903.6815</b>	<b>239,903.6815</b>	<b>8.7527</b>	<b>0.0171</b>	<b>240,092.7964</b>

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												809.5890	809.5890	0.0155	0.0148	814.5161
Mobile												238,967.9323	238,967.9323	8.7302		239,151.2654
<b>Total</b>												<b>239,779.2528</b>	<b>239,779.2528</b>	<b>8.7503</b>	<b>0.0148</b>	<b>239,967.6104</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.03	13.32	0.05

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												238,967.9 323	238,967.9 323	8.7302		239,151.2 654
Mitigated												238,967.9 323	238,967.9 323	8.7302		239,151.2 654

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,600.00	2,600.00	2600.00	9,246,328	9,246,328
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,274.40	17,777.84	8979.20	52,393,677	52,393,677
Supermarket	4,086.18	7,097.80	6652.06	17,365,193	17,365,193
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	22,706.88	28,221.94	18,977.56	81,659,251	81,659,251

#### 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated												809.5890	809.5890	0.0155	0.0148	814.5161
NaturalGas Unmitigated												934.0177	934.0177	0.0179	0.0171	939.7020

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1647.37												193.8082	193.8082	3.7100e-003	3.5500e-003	194.9877
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3061.7												360.1998	360.1998	6.9000e-003	6.6000e-003	362.3920
Supermarket	3230.08												380.0097	380.0097	7.2800e-003	6.9700e-003	382.3224
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>934.0177</b>	<b>934.0177</b>	<b>0.0179</b>	<b>0.0171</b>	<b>939.7020</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.45706												171.4192	171.4192	3.2900e-003	3.1400e-003	172.4624
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.58038												303.5745	303.5745	5.8200e-003	5.5700e-003	305.4220
Supermarket	2.84406												334.5953	334.5953	6.4100e-003	6.1300e-003	336.6316
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>809.5891</b>	<b>809.5891</b>	<b>0.0155</b>	<b>0.0148</b>	<b>814.5161</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												1.7315	1.7315	4.6400e-003		1.8290
Mitigated												1.7315	1.7315	4.6400e-003		1.8290

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Use Reclaimed Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation



**Cannon Road - Specific Plan Operational GHG (CY 2020)**  
**San Diego County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	531.4	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes 33% RPS.

Land Use - Land uses based on Specific Plan.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Includes Advanced Clean Car reduction.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMOD default values.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Energy Mitigation - 30% reduction to update to Title 24 - 2013 building standards. Using Energy Star appliances.

Water Mitigation - According to water study, 16.7% of outdoor water use will be reclaimed water.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	CO2IntensityFactor	720.49	531.4
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	512.40	298.00
tblSolidWaste	SolidWasteGenerationRate	259.44	151.00

tblSolidWaste	SolidWasteGenerationRate	0.00	189.00
tblVehicleEF	LDA	244.25	233.76
tblVehicleEF	LDA	52.29	50.63
tblVehicleEF	LDT1	297.79	293.48
tblVehicleEF	LDT1	63.53	62.90
tblVehicleEF	LDT2	364.72	358.39
tblVehicleEF	LDT2	77.49	76.52
tblVehicleEF	MDV	489.56	483.35
tblVehicleEF	MDV	103.31	102.36
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00

tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.04
tblVehicleTrips	ST_TR	49.97	36.43
tblVehicleTrips	ST_TR	177.59	154.30
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.04
tblVehicleTrips	SU_TR	25.24	18.40
tblVehicleTrips	SU_TR	166.44	144.61
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.04
tblVehicleTrips	WD_TR	42.94	31.30
tblVehicleTrips	WD_TR	102.24	88.83
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	3,849,476.00
tblWater	IndoorWaterUseRate	36,147,390.48	25,377,913.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,582,986.00
tblWater	IndoorWaterUseRate	0.00	218,206.00

tblWater	OutdoorWaterUseRate	1,441,920.14	245,811.00
tblWater	OutdoorWaterUseRate	22,154,852.23	15,554,006.00
tblWater	OutdoorWaterUseRate	175,371.27	110,802.00

## 2.0 Emissions Summary

[illegible]

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												934.0177	934.0177	0.0179	0.0171	939.7020
Mobile												227,543.1520	227,543.1520	8.7364		227,726.6171
<b>Total</b>												<b>228,478.9012</b>	<b>228,478.9012</b>	<b>8.7590</b>	<b>0.0171</b>	<b>228,668.1481</b>

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												809.5890	809.5890	0.0155	0.0148	814.5161
Mobile												227,543.1520	227,543.1520	8.7364		227,726.6171
<b>Total</b>												<b>228,354.4725</b>	<b>228,354.4725</b>	<b>8.7566</b>	<b>0.0148</b>	<b>228,542.9622</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.03	13.32	0.05

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												227,543.1 520	227,543.1 520	8.7364		227,726.6 171
Mitigated												227,543.1 520	227,543.1 520	8.7364		227,726.6 171

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,600.00	2,600.00	2600.00	9,246,328	9,246,328
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,274.40	17,777.84	8979.20	52,393,677	52,393,677
Supermarket	4,086.18	7,097.80	6652.06	17,365,193	17,365,193
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	22,706.88	28,221.94	18,977.56	81,659,251	81,659,251

#### 4.3 Trip Type Information



	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated												809.5890	809.5890	0.0155	0.0148	814.5161
NaturalGas Unmitigated												934.0177	934.0177	0.0179	0.0171	939.7020

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1647.37												193.8082	193.8082	3.7100e-003	3.5500e-003	194.9877
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3061.7												360.1998	360.1998	6.9000e-003	6.6000e-003	362.3920
Supermarket	3230.08												380.0097	380.0097	7.2800e-003	6.9700e-003	382.3224
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>934.0177</b>	<b>934.0177</b>	<b>0.0179</b>	<b>0.0171</b>	<b>939.7020</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.45706												171.4192	171.4192	3.2900e-003	3.1400e-003	172.4624
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.58038												303.5745	303.5745	5.8200e-003	5.5700e-003	305.4220
Supermarket	2.84406												334.5953	334.5953	6.4100e-003	6.1300e-003	336.6316
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>809.5891</b>	<b>809.5891</b>	<b>0.0155</b>	<b>0.0148</b>	<b>814.5161</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated												1.7315	1.7315	4.6400e-003		1.8290
Unmitigated												1.7315	1.7315	4.6400e-003		1.8290

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Use Reclaimed Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

**Cannon Road - 2014 BAU Scenario Operational GHG (CY 2020)**  
**San Diego County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	634.51	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes 20% RPS.

Land Use - Land uses based on Project Description.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Pavley EF (no-LCFS).

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Updated to Title 24 - 2005 building standards.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	0.88	0.88
tblEnergyUse	LightingElect	2.63	2.63
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	CO2IntensityFactor	720.49	634.51
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.00	325.00
tblVehicleEF	LDA	244.25	271.39

tblVehicleEF	LDA	52.29	58.10
tblVehicleEF	LDT1	297.79	330.88
tblVehicleEF	LDT1	63.53	70.59
tblVehicleEF	LDT2	364.72	405.24
tblVehicleEF	LDT2	77.49	86.11
tblVehicleEF	MDV	489.56	543.95
tblVehicleEF	MDV	103.31	114.79
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00



tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.10
tblVehicleTrips	ST_TR	49.97	38.75
tblVehicleTrips	ST_TR	177.59	164.15
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.10
tblVehicleTrips	SU_TR	25.24	19.57
tblVehicleTrips	SU_TR	166.44	153.84
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.10
tblVehicleTrips	WD_TR	42.94	33.30
tblVehicleTrips	WD_TR	102.24	94.50
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	4,024,465.00
tblWater	IndoorWaterUseRate	36,147,390.48	26,531,541.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,745,861.00
tblWater	IndoorWaterUseRate	0.00	228,125.00
tblWater	OutdoorWaterUseRate	1,441,920.14	256,985.00
tblWater	OutdoorWaterUseRate	22,154,852.23	16,261,059.00

tblWater	OutdoorWaterUseRate	175,371.27	115,839.00
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## 2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Energy											0.0000	4,201.3568	4,201.3568	0.1878	0.0412	4,218.0582
Mobile											0.0000	35,416.3170	35,416.3170	1.2433	0.0000	35,442.4258
Waste											222.6486	0.0000	222.6486	13.1582	0.0000	498.9699
Water											10.9548	182.5910	193.5458	1.1335	0.0283	226.1205
<b>Total</b>											<b>233.6034</b>	<b>39,800.4061</b>	<b>40,034.0095</b>	<b>15.7231</b>	<b>0.0695</b>	<b>40,385.7238</b>

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Energy											0.0000	4,201.3568	4,201.3568	0.1878	0.0412	4,218.0582
Mobile											0.0000	35,416.3170	35,416.3170	1.2433	0.0000	35,442.4258
Waste											222.6486	0.0000	222.6486	13.1582	0.0000	498.9699
Water											10.9548	182.5910	193.5458	1.1333	0.0283	226.1031
<b>Total</b>											<b>233.6034</b>	<b>39,800.4061</b>	<b>40,034.0095</b>	<b>15.7229</b>	<b>0.0694</b>	<b>40,385.7063</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>

## 2.3 Vegetation

### Vegetation

	CO2e
Category	MT
Vegetation Land Change	-536.2500
Total	-536.2500

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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### 3.1 Mitigation Measures Construction

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	35,416.3170	35,416.3170	1.2433	0.0000	35,442.4258
Unmitigated											0.0000	35,416.3170	35,416.3170	1.2433	0.0000	35,442.4258

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,750.00	2,750.00	2750.00	9,779,770	9,779,770
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	16,250.40	18,910.00	9550.16	55,738,166	55,738,166
Supermarket	4,347.00	7,550.90	7076.64	18,473,625	18,473,625
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	24,093.70	29,957.20	20,123.10	86,645,612	86,645,612

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: Y

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated											0.0000	160.9394	160.9394	3.0800e-003	2.9500e-003	161.9188
NaturalGas Unmitigated											0.0000	160.9394	160.9394	3.0800e-003	2.9500e-003	161.9188
Electricity Mitigated											0.0000	4,040.4174	4,040.4174	0.1847	0.0382	4,056.1394
Electricity Unmitigated											0.0000	4,040.4174	4,040.4174	0.1847	0.0382	4,056.1394

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Movie Theater (No Matinee)	626790											0.0000	33.4479	33.4479	6.4000e-004	6.1000e-004	33.6515
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17608e+006											0.0000	62.7601	62.7601	1.2000e-003	1.1500e-003	63.1421
Supermarket	1.21302e+006											0.0000	64.7314	64.7314	1.2400e-003	1.1900e-003	65.1253
Unenclosed Parking Structure	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>												<b>0.0000</b>	<b>160.9394</b>	<b>160.9394</b>	<b>3.0800e-003</b>	<b>2.9500e-003</b>	<b>161.9188</b>



## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Movie Theater (No Matinee)	626790											0.0000	33.4479	33.4479	6.4000e-004	6.1000e-004	33.6515
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17608e+006											0.0000	62.7601	62.7601	1.2000e-003	1.1500e-003	63.1421
Supermarket	1.21302e+006											0.0000	64.7314	64.7314	1.2400e-003	1.1900e-003	65.1253
Unenclosed Parking Structure	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>												<b>0.0000</b>	<b>160.9394</b>	<b>160.9394</b>	<b>3.0800e-003</b>	<b>2.9500e-003</b>	<b>161.9188</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	478380	137.6820	6.2900e-003	1.3000e-003	138.2178
Parking Lot	175200	50.4241	2.3000e-003	4.8000e-004	50.6203
Regional Shopping Center	7.21752e+006	2,077.2665	0.0949	0.0196	2,085.3495
Supermarket	1.7503e+006	503.7519	0.0230	4.7600e-003	505.7121
Unenclosed Parking Structure	4.41714e+006	1,271.2929	0.0581	0.0120	1,276.2397
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>4,040.4174</b>	<b>0.1847</b>	<b>0.0382</b>	<b>4,056.1394</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	478380	137.6820	6.2900e-003	1.3000e-003	138.2178
Parking Lot	175200	50.4241	2.3000e-003	4.8000e-004	50.6203
Regional Shopping Center	7.21752e+006	2,077.2665	0.0949	0.0196	2,085.3495
Supermarket	1.7503e+006	503.7519	0.0230	4.7600e-003	505.7121
Unenclosed Parking Structure	4.41714e+006	1,271.2929	0.0581	0.0120	1,276.2397
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>4,040.4174</b>	<b>0.1847</b>	<b>0.0382</b>	<b>4,056.1394</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Unmitigated											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
<b>Total</b>											<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1493</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
<b>Total</b>											<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1493</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	193.5458	1.1335	0.0283	226.1205
Mitigated	193.5458	1.1333	0.0283	226.1031

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	4.02447 / 0.256985	17.1804	0.1319	3.2500e- 003	20.9561
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.5315 / 16.2611	159.8414	0.8715	0.0219	184.9140
Supermarket	3.74586 / 0.115839	15.5966	0.1227	3.0200e- 003	19.1094
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0.228125 / 0	0.9273	7.4700e- 003	1.8000e- 004	1.1411
<b>Total</b>		<b>193.5458</b>	<b>1.1335</b>	<b>0.0283</b>	<b>226.1205</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	4.02447 / 0.256985	17.1804	0.1318	3.2400e-003	20.9541
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.5315 / 16.2611	159.8414	0.8713	0.0218	184.9005
Supermarket	3.74586 / 0.115839	15.5966	0.1227	3.0100e-003	19.1075
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0.228125 / 0	0.9273	7.4700e-003	1.8000e-004	1.1410
<b>Total</b>		<b>193.5458</b>	<b>1.1333</b>	<b>0.0282</b>	<b>226.1031</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	222.6486	13.1582	0.0000	498.9699
Unmitigated	222.6486	13.1582	0.0000	498.9699

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	512.4	104.0126	6.1470	0.0000	233.0989
Supermarket	259.44	52.6640	3.1124	0.0000	118.0234
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	325	65.9721	3.8988	0.0000	147.8476
<b>Total</b>		<b>222.6486</b>	<b>13.1582</b>	<b>0.0000</b>	<b>498.9699</b>



## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	512.4	104.0126	6.1470	0.0000	233.0989
Supermarket	259.44	52.6640	3.1124	0.0000	118.0234
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	325	65.9721	3.8988	0.0000	147.8476
<b>Total</b>		<b>222.6486</b>	<b>13.1582</b>	<b>0.0000</b>	<b>498.9699</b>

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-536.2500	0.0000	0.0000	-536.2500

## 10.1 Vegetation Land Change

### Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Scrub	157.6 / 120.1	-536.2500	0.0000	0.0000	-536.2500
<b>Total</b>		<b>-536.2500</b>	<b>0.0000</b>	<b>0.0000</b>	<b>-536.2500</b>

**Cannon Road - 2014 BAU Scenario Operational GHG (CY 2020)****San Diego County, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	634.51	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - Includes 20% RPS.

Land Use - Land uses based on Project Description.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Pavley EF (no-LCFS).

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Updated to Title 24 - 2005 building standards.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	0.88	0.88
tblEnergyUse	LightingElect	2.63	2.63
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	CO2IntensityFactor	720.49	634.51
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.00	325.00
tblVehicleEF	LDA	244.25	271.39

tblVehicleEF	LDA	52.29	58.10
tblVehicleEF	LDT1	297.79	330.88
tblVehicleEF	LDT1	63.53	70.59
tblVehicleEF	LDT2	364.72	405.24
tblVehicleEF	LDT2	77.49	86.11
tblVehicleEF	MDV	489.56	543.95
tblVehicleEF	MDV	103.31	114.79
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00

tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.10
tblVehicleTrips	ST_TR	49.97	38.75
tblVehicleTrips	ST_TR	177.59	164.15
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.10
tblVehicleTrips	SU_TR	25.24	19.57
tblVehicleTrips	SU_TR	166.44	153.84
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.10
tblVehicleTrips	WD_TR	42.94	33.30
tblVehicleTrips	WD_TR	102.24	94.50
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	4,024,465.00
tblWater	IndoorWaterUseRate	36,147,390.48	26,531,541.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,745,861.00
tblWater	IndoorWaterUseRate	0.00	228,125.00
tblWater	OutdoorWaterUseRate	1,441,920.14	256,985.00
tblWater	OutdoorWaterUseRate	22,154,852.23	16,261,059.00

tblWater	OutdoorWaterUseRate	175,371.27	115,839.00
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## 2.0 Emissions Summary

[illegible]

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												253,661.1637	253,661.1637	9.2669		253,855.7692
<b>Total</b>												<b>254,634.9789</b>	<b>254,634.9789</b>	<b>9.2902</b>	<b>0.0178</b>	<b>254,835.5979</b>

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												253,661.1637	253,661.1637	9.2669		253,855.7692
<b>Total</b>												<b>254,634.9789</b>	<b>254,634.9789</b>	<b>9.2902</b>	<b>0.0178</b>	<b>254,835.5979</b>



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												253,661.1 637	253,661.1 637	9.2669		253,855.7 692
Mitigated												253,661.1 637	253,661.1 637	9.2669		253,855.7 692

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,750.00	2,750.00	2750.00	9,779,770	9,779,770
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	16,250.40	18,910.00	9550.16	55,738,166	55,738,166
Supermarket	4,347.00	7,550.90	7076.64	18,473,625	18,473,625
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	24,093.70	29,957.20	20,123.10	86,645,612	86,645,612

#### 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: Y

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated												972.0838	972.0838	0.0186	0.0178	977.9997
NaturalGas Unmitigated												972.0838	972.0838	0.0186	0.0178	977.9997

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1717.23												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3222.14												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3323.34												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.71723												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3.22214												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3.32334												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												1.7315	1.7315	4.6400e-003		1.8290
Mitigated												1.7315	1.7315	4.6400e-003		1.8290

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

**Cannon Road - 2014 BAU Scenario Operational GHG (CY 2020)**  
**San Diego County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	634.51	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data



Project Characteristics - Includes 20% RPS.

Land Use - Land uses based on Project Description.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Pavley EF (no-LCFS).

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Updated to Title 24 - 2005 building standards.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	0.88	0.88
tblEnergyUse	LightingElect	2.63	2.63
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	CO2IntensityFactor	720.49	634.51
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.00	325.00
tblVehicleEF	LDA	244.25	271.39

tblVehicleEF	LDA	52.29	58.10
tblVehicleEF	LDT1	297.79	330.88
tblVehicleEF	LDT1	63.53	70.59
tblVehicleEF	LDT2	364.72	405.24
tblVehicleEF	LDT2	77.49	86.11
tblVehicleEF	MDV	489.56	543.95
tblVehicleEF	MDV	103.31	114.79
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00

tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.10
tblVehicleTrips	ST_TR	49.97	38.75
tblVehicleTrips	ST_TR	177.59	164.15
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.10
tblVehicleTrips	SU_TR	25.24	19.57
tblVehicleTrips	SU_TR	166.44	153.84
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.10
tblVehicleTrips	WD_TR	42.94	33.30
tblVehicleTrips	WD_TR	102.24	94.50
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	4,024,465.00
tblWater	IndoorWaterUseRate	36,147,390.48	26,531,541.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,745,861.00
tblWater	IndoorWaterUseRate	0.00	228,125.00
tblWater	OutdoorWaterUseRate	1,441,920.14	256,985.00
tblWater	OutdoorWaterUseRate	22,154,852.23	16,261,059.00

tblWater	OutdoorWaterUseRate	175,371.27	115,839.00
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## 2.0 Emissions Summary

[illegible]

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												241,533.9170	241,533.9170	9.2736		241,728.6627
<b>Total</b>												<b>242,507.7323</b>	<b>242,507.7323</b>	<b>9.2969</b>	<b>0.0178</b>	<b>242,708.4914</b>

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												241,533.9170	241,533.9170	9.2736		241,728.6627
<b>Total</b>												<b>242,507.7323</b>	<b>242,507.7323</b>	<b>9.2969</b>	<b>0.0178</b>	<b>242,708.4914</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												241,533.9 170	241,533.9 170	9.2736		241,728.6 627
Mitigated												241,533.9 170	241,533.9 170	9.2736		241,728.6 627

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,750.00	2,750.00	2750.00	9,779,770	9,779,770
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	16,250.40	18,910.00	9550.16	55,738,166	55,738,166
Supermarket	4,347.00	7,550.90	7076.64	18,473,625	18,473,625
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	24,093.70	29,957.20	20,123.10	86,645,612	86,645,612

#### 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: Y

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated												972.0838	972.0838	0.0186	0.0178	977.9997
NaturalGas Unmitigated												972.0838	972.0838	0.0186	0.0178	977.9997



## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1717.23												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3222.14												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3323.34												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.71723												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3.22214												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3.32334												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated												1.7315	1.7315	4.6400e-003		1.8290
Unmitigated												1.7315	1.7315	4.6400e-003		1.8290

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

**Cannon Road - 2008 BAU Scenario Operational GHG (CY 2020)**  
**San Diego County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses based on Project Description.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Non-Pavley CO2 Emissions Factors - Year 2020.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Updated to Title 24 - 2005 building standards.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	0.00	175.60
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.00	325.00
tblVehicleEF	LDA	244.25	355.43
tblVehicleEF	LDA	52.29	73.55
tblVehicleEF	LDT1	297.79	411.15
tblVehicleEF	LDT1	63.53	84.69

tblVehicleEF	LDT2	364.72	483.75
tblVehicleEF	LDT2	77.49	100.45
tblVehicleEF	MDV	489.56	617.07
tblVehicleEF	MDV	103.31	127.34
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00

tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.10
tblVehicleTrips	ST_TR	49.97	38.75
tblVehicleTrips	ST_TR	177.59	164.15
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.10
tblVehicleTrips	SU_TR	25.24	19.57
tblVehicleTrips	SU_TR	166.44	153.84
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.10
tblVehicleTrips	WD_TR	42.94	33.30
tblVehicleTrips	WD_TR	102.24	94.50
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	4,024,465.00
tblWater	IndoorWaterUseRate	36,147,390.48	26,531,541.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,745,861.00
tblWater	IndoorWaterUseRate	0.00	228,125.00
tblWater	OutdoorWaterUseRate	1,441,920.14	256,985.00
tblWater	OutdoorWaterUseRate	22,154,852.23	16,261,059.00
tblWater	OutdoorWaterUseRate	175,371.27	115,839.00

## 2.0 Emissions Summary

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Energy											0.0000	4,750.2182	4,750.2182	0.1878	0.0412	4,766.9243
Mobile											0.0000	41,904.6898	41,904.6898	1.2433	0.0000	41,930.7986
Waste											222.6486	0.0000	222.6486	13.1582	0.0000	498.9699
Water											10.9548	207.3332	218.2880	1.1335	0.0283	250.8627
<b>Total</b>											<b>233.6034</b>	<b>46,862.3825</b>	<b>47,095.9859</b>	<b>15.7231</b>	<b>0.0695</b>	<b>47,447.7048</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Energy											0.0000	4,750.2182	4,750.2182	0.1878	0.0412	4,766.9243
Mobile											0.0000	41,904.6898	41,904.6898	1.2433	0.0000	41,930.7986
Waste											222.6486	0.0000	222.6486	13.1582	0.0000	498.9699
Water											10.9548	207.3332	218.2880	1.1333	0.0283	250.8453
<b>Total</b>											<b>233.6034</b>	<b>46,862.3825</b>	<b>47,095.9859</b>	<b>15.7229</b>	<b>0.0694</b>	<b>47,447.6874</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>

## 2.3 Vegetation

### Vegetation

	CO2e
Category	MT
Vegetation Land Change	-536.2500
Total	-536.2500

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
No Phase				0.00	10.80	7.30				

### 3.1 Mitigation Measures Construction

## 4.0 Operational Detail - Mobile

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### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	41,904.6898	41,904.6898	1.2433	0.0000	41,930.7986
Unmitigated											0.0000	41,904.6898	41,904.6898	1.2433	0.0000	41,930.7986

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,750.00	2,750.00	2750.00	9,779,770	9,779,770
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	16,250.40	18,910.00	9550.16	55,738,166	55,738,166
Supermarket	4,347.00	7,550.90	7076.64	18,473,625	18,473,625
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	24,093.70	29,957.20	20,123.10	86,645,612	86,645,612

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: Y

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated											0.0000	160.9394	160.9394	3.0800e-003	2.9500e-003	161.9188
NaturalGas Unmitigated											0.0000	160.9394	160.9394	3.0800e-003	2.9500e-003	161.9188
Electricity Mitigated											0.0000	4,589.2788	4,589.2788	0.1847	0.0382	4,605,0055
Electricity Unmitigated											0.0000	4,589.2788	4,589.2788	0.1847	0.0382	4,605,0055

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Movie Theater (No Matinee)	626790											0.0000	33.4479	33.4479	6.4000e-004	6.1000e-004	33.6515
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17608e+006											0.0000	62.7601	62.7601	1.2000e-003	1.1500e-003	63.1421
Supermarket	1.21302e+006											0.0000	64.7314	64.7314	1.2400e-003	1.1900e-003	65.1253
Unenclosed Parking Structure	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>												<b>0.0000</b>	<b>160.9394</b>	<b>160.9394</b>	<b>3.0800e-003</b>	<b>2.9500e-003</b>	<b>161.9188</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Movie Theater (No Matinee)	626790											0.0000	33.4479	33.4479	6.4000e-004	6.1000e-004	33.6515
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17608e+006											0.0000	62.7601	62.7601	1.2000e-003	1.1500e-003	63.1421
Supermarket	1.21302e+006											0.0000	64.7314	64.7314	1.2400e-003	1.1900e-003	65.1253
Unenclosed Parking Structure	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>												<b>0.0000</b>	<b>160.9394</b>	<b>160.9394</b>	<b>3.0800e-003</b>	<b>2.9500e-003</b>	<b>161.9188</b>



### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	478380	156.3388	6.2900e-003	1.3000e-003	156.8745
Parking Lot	176000	57.5183	2.3200e-003	4.8000e-004	57.7155
Regional Shopping Center	7.21752e+006	2,358.7488	0.0949	0.0196	2,366.8319
Supermarket	1.7503e+006	572.0134	0.0230	4.7600e-003	573.9736
Unenclosed Parking Structure	4.4205e+006	1,444.6595	0.0582	0.0120	1,449.6101
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>4,589.2788</b>	<b>0.1847</b>	<b>0.0382</b>	<b>4,605.0055</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	478380	156.3388	6.2900e-003	1.3000e-003	156.8745
Parking Lot	176000	57.5183	2.3200e-003	4.8000e-004	57.7155
Regional Shopping Center	7.21752e+006	2,358.7488	0.0949	0.0196	2,366.8319
Supermarket	1.7503e+006	572.0134	0.0230	4.7600e-003	573.9736
Unenclosed Parking Structure	4.4205e+006	1,444.6595	0.0582	0.0120	1,449.6101
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>4,589.2788</b>	<b>0.1847</b>	<b>0.0382</b>	<b>4,605.0055</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
Unmitigated											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
<b>Total</b>											<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1493</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1493
<b>Total</b>											<b>0.0000</b>	<b>0.1414</b>	<b>0.1414</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1493</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	218.2880	1.1335	0.0283	250.8627
Mitigated	218.2880	1.1333	0.0283	250.8453

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	4.02447 / 0.256985	19.3355	0.1319	3.2500e-003	23.1111
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.5315 / 16.2611	180.3603	0.8715	0.0219	205.4329
Supermarket	3.74586 / 0.115839	17.5490	0.1227	3.0200e-003	21.0618
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0.228125 / 0	1.0431	7.4700e-003	1.8000e-004	1.2570
<b>Total</b>		<b>218.2880</b>	<b>1.1335</b>	<b>0.0283</b>	<b>250.8627</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	4.02447 / 0.256985	19.3355	0.1318	3.2400e-003	23.1091
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.5315 / 16.2611	180.3603	0.8713	0.0218	205.4194
Supermarket	3.74586 / 0.115839	17.5490	0.1227	3.0100e-003	21.0599
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0.228125 / 0	1.0431	7.4700e-003	1.8000e-004	1.2569
<b>Total</b>		<b>218.2880</b>	<b>1.1333</b>	<b>0.0282</b>	<b>250.8453</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	222.6486	13.1582	0.0000	498.9699
Unmitigated	222.6486	13.1582	0.0000	498.9699

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	512.4	104.0126	6.1470	0.0000	233.0989
Supermarket	259.44	52.6640	3.1124	0.0000	118.0234
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	325	65.9721	3.8988	0.0000	147.8476
<b>Total</b>		<b>222.6486</b>	<b>13.1582</b>	<b>0.0000</b>	<b>498.9699</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	512.4	104.0126	6.1470	0.0000	233.0989
Supermarket	259.44	52.6640	3.1124	0.0000	118.0234
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	325	65.9721	3.8988	0.0000	147.8476
<b>Total</b>		<b>222.6486</b>	<b>13.1582</b>	<b>0.0000</b>	<b>498.9699</b>

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-536.2500	0.0000	0.0000	-536.2500

## 10.1 Vegetation Land Change

### Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Scrub	157.6 / 120.1	-536.2500	0.0000	0.0000	-536.2500
<b>Total</b>		<b>-536.2500</b>	<b>0.0000</b>	<b>0.0000</b>	<b>-536.2500</b>

**Cannon Road - 2008 BAU Scenario Operational GHG (CY 2020)****San Diego County, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Land uses based on Project Description.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Non-Pavley CO2 Emissions Factors - Year 2020.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Updated to Title 24 - 2005 building standards.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	0.00	175.60
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.00	325.00
tblVehicleEF	LDA	244.25	355.43
tblVehicleEF	LDA	52.29	73.55
tblVehicleEF	LDT1	297.79	411.15
tblVehicleEF	LDT1	63.53	84.69

tblVehicleEF	LDT2	364.72	483.75
tblVehicleEF	LDT2	77.49	100.45
tblVehicleEF	MDV	489.56	617.07
tblVehicleEF	MDV	103.31	127.34
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00

tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.10
tblVehicleTrips	ST_TR	49.97	38.75
tblVehicleTrips	ST_TR	177.59	164.15
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.10
tblVehicleTrips	SU_TR	25.24	19.57
tblVehicleTrips	SU_TR	166.44	153.84
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.10
tblVehicleTrips	WD_TR	42.94	33.30
tblVehicleTrips	WD_TR	102.24	94.50
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	4,024,465.00
tblWater	IndoorWaterUseRate	36,147,390.48	26,531,541.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,745,861.00
tblWater	IndoorWaterUseRate	0.00	228,125.00
tblWater	OutdoorWaterUseRate	1,441,920.14	256,985.00
tblWater	OutdoorWaterUseRate	22,154,852.23	16,261,059.00
tblWater	OutdoorWaterUseRate	175,371.27	115,839.00

## 2.0 Emissions Summary

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[illegible]

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												253,661.1637	253,661.1637	9.2669		253,855.7692
<b>Total</b>												<b>254,634.9789</b>	<b>254,634.9789</b>	<b>9.2902</b>	<b>0.0178</b>	<b>254,835.5979</b>

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												253,661.1637	253,661.1637	9.2669		253,855.7692
<b>Total</b>												<b>254,634.9789</b>	<b>254,634.9789</b>	<b>9.2902</b>	<b>0.0178</b>	<b>254,835.5979</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
No Phase				0.00	10.80	7.30				

### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile



#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												253,661.1 637	253,661.1 637	9.2669		253,855.7 692
Mitigated												253,661.1 637	253,661.1 637	9.2669		253,855.7 692

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,750.00	2,750.00	2750.00	9,779,770	9,779,770
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	16,250.40	18,910.00	9550.16	55,738,166	55,738,166
Supermarket	4,347.00	7,550.90	7076.64	18,473,625	18,473,625
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	24,093.70	29,957.20	20,123.10	86,645,612	86,645,612

#### 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: Y

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated												972.0838	972.0838	0.0186	0.0178	977.9997
NaturalGas Unmitigated												972.0838	972.0838	0.0186	0.0178	977.9997

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1717.23												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3222.14												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3323.34												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.71723												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3.22214												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3.32334												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												1.7315	1.7315	4.6400e-003		1.8290
Mitigated												1.7315	1.7315	4.6400e-003		1.8290

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

**Cannon Road - 2008 BAU Scenario Operational GHG (CY 2020)****San Diego County, Winter****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2020
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Land uses based on Project Description.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Vehicle Emission Factors - Non-Pavley CO2 Emissions Factors - Year 2020.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Updated to Title 24 - 2005 building standards.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	0.00	175.60
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.00	325.00
tblVehicleEF	LDA	244.25	355.43
tblVehicleEF	LDA	52.29	73.55
tblVehicleEF	LDT1	297.79	411.15
tblVehicleEF	LDT1	63.53	84.69



tblVehicleEF	LDT2	364.72	483.75
tblVehicleEF	LDT2	77.49	100.45
tblVehicleEF	MDV	489.56	617.07
tblVehicleEF	MDV	103.31	127.34
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00

tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.10
tblVehicleTrips	ST_TR	49.97	38.75
tblVehicleTrips	ST_TR	177.59	164.15
tblVehicleTrips	ST_TR	0.00	4.25
tblVehicleTrips	SU_TR	1.80	1.10
tblVehicleTrips	SU_TR	25.24	19.57
tblVehicleTrips	SU_TR	166.44	153.84
tblVehicleTrips	SU_TR	0.00	4.25
tblVehicleTrips	WD_TR	1.80	1.10
tblVehicleTrips	WD_TR	42.94	33.30
tblVehicleTrips	WD_TR	102.24	94.50
tblVehicleTrips	WD_TR	0.00	4.25
tblWater	IndoorWaterUseRate	22,590,082.22	4,024,465.00
tblWater	IndoorWaterUseRate	36,147,390.48	26,531,541.00
tblWater	IndoorWaterUseRate	5,670,337.88	3,745,861.00
tblWater	IndoorWaterUseRate	0.00	228,125.00
tblWater	OutdoorWaterUseRate	1,441,920.14	256,985.00
tblWater	OutdoorWaterUseRate	22,154,852.23	16,261,059.00
tblWater	OutdoorWaterUseRate	175,371.27	115,839.00

## 2.0 Emissions Summary

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[illegible]

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												241,533.9170	241,533.9170	9.2736		241,728.6627
<b>Total</b>												<b>242,507.7323</b>	<b>242,507.7323</b>	<b>9.2969</b>	<b>0.0178</b>	<b>242,708.4914</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area												1.7315	1.7315	4.6400e-003		1.8290
Energy												972.0838	972.0838	0.0186	0.0178	977.9997
Mobile												241,533.9170	241,533.9170	9.2736		241,728.6627
<b>Total</b>												<b>242,507.7323</b>	<b>242,507.7323</b>	<b>9.2969</b>	<b>0.0178</b>	<b>242,708.4914</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
No Phase				0.00	10.80	7.30				

### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated												241,533.9 170	241,533.9 170	9.2736		241,728.6 627
Mitigated												241,533.9 170	241,533.9 170	9.2736		241,728.6 627

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,750.00	2,750.00	2750.00	9,779,770	9,779,770
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	16,250.40	18,910.00	9550.16	55,738,166	55,738,166
Supermarket	4,347.00	7,550.90	7076.64	18,473,625	18,473,625
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	24,093.70	29,957.20	20,123.10	86,645,612	86,645,612

#### 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: Y

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated												972.0838	972.0838	0.0186	0.0178	977.9997
NaturalGas Unmitigated												972.0838	972.0838	0.0186	0.0178	977.9997

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1717.23												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3222.14												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3323.34												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>



## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.71723												202.0274	202.0274	3.8700e-003	3.7000e-003	203.2569
Parking Lot	0												0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3.22214												379.0749	379.0749	7.2700e-003	6.9500e-003	381.3819
Supermarket	3.32334												390.9815	390.9815	7.4900e-003	7.1700e-003	393.3609
Unenclosed Parking Structure	0												0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0												0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>													<b>972.0838</b>	<b>972.0838</b>	<b>0.0186</b>	<b>0.0178</b>	<b>977.9997</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated												1.7315	1.7315	4.6400e-003		1.8290
Unmitigated												1.7315	1.7315	4.6400e-003		1.8290

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating													0.0000			0.0000
Consumer Products													0.0000			0.0000
Landscaping												1.7315	1.7315	4.6400e-003		1.8290
<b>Total</b>												<b>1.7315</b>	<b>1.7315</b>	<b>4.6400e-003</b>		<b>1.8290</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

## **Appendix B**

### **RTP and SCS Consistency Memorandum**



## MEMORANDUM

Date:	March 11, 2015
To:	Eric Lu and Joy Brooks, Environ
From:	Sohrab Rashid & Dale Domingo, Fehr & Peers
Subject:	<b>Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) Consistency for the Agua Hedionda Specific Plan</b>

*SD14-0154*

The proposed Agua Hedionda Specific Plan consists of 585,000 square feet of visitor-serving commercial uses, and an additional 175 acres of open space and agricultural uses. The Specific Plan proposes to develop the Specific Plan area with a 488,000 square feet (SF) regional shopping center; a 2,500-seat (51,000 SF) movie theater; a 46,000 SF supermarket; and, 175 acres of passive parks, agriculture uses, and habitat management preservation areas.

Senate Bill 375 (SB 375), enacted in 2008, requires each of California's Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) for inclusion in their Regional Transportation Plan (RTP) in order to lower greenhouse gas (GHG) emissions generated by automobiles and light trucks in their region. The San Diego Association of Governments (SANDAG) is the MPO for the San Diego region.

In response to the requirements of SB 375, the SANDAG Board of Directors adopted the 2050 RTP and SCS on October 28, 2011. The RTP and SCS is a long-range transportation plan that serves as a guide for achieving public policy decisions for a wide range of multimodal transportation improvements throughout the region. The SCS addresses GHG reduction targets adopted by the California Air Resource Board (CARB) pursuant to SB 375. CARB's targets require the San Diego region to reduce per capita emissions from 2005 levels by seven percent by 2020 and 13 percent by 2035. SANDAG's SCS is expected to result in regional per capita GHG emission reductions of 14 percent in 2020 and 13 percent by 2035; thus, the SCS will meet or exceed CARB's targets. In Executive Order G-11-114 (dated November 18, 2011), CARB acknowledged that SANDAG's RTP and SCS, if implemented, would meet its targets.



SANDAG's travel demand model was used to produce future year traffic forecasts as part of the RTP and SCS development process, and was used to evaluate the future GHG emissions under the RTP and SCS and determine attainment of CARB's targets. The SANDAG model reflects the forecasted population and employment for various planning years out to 2050, and the modeled land uses are consistent with the adopted General Plans of all 18 cities plus the County of San Diego within SANDAG's jurisdiction that were in place at the time of SANDAG's 2011 adoption of the RTP and SCS.

The SANDAG model has assumptions for land use for all areas within the City of Carlsbad, including the Specific Plan area. A review of the SANDAG model, utilized in connection with adoption of the RTP and SCS, identified the Specific Plan area's traffic analysis zone (TAZ) for the development of 50 acres of regional commercial, which would equate to approximately 653,000 SF when assuming a 0.3 floor-to-area ratio. Therefore, the proposed Specific Plan is consistent with and includes approximately 63,000 SF less land use than the amount included in the SANDAG model.

In summary, the Specific Plan's proposed land use development is consistent with the City of Carlsbad's General Plan land use designation used by SANDAG to develop its SB 375 forecasted development pattern in the SCS. Similarly, the Specific Plan area was identified for regional commercial development in the SANDAG model. Because the SANDAG model anticipated development of the kind and quantity proposed by the Specific Plan, and the model demonstrated achievement of the SB 375 reduction targets to the satisfaction of CARB, the proposed Specific Plan is consistent with the objectives of SB 375 and SANDAG's SCS.